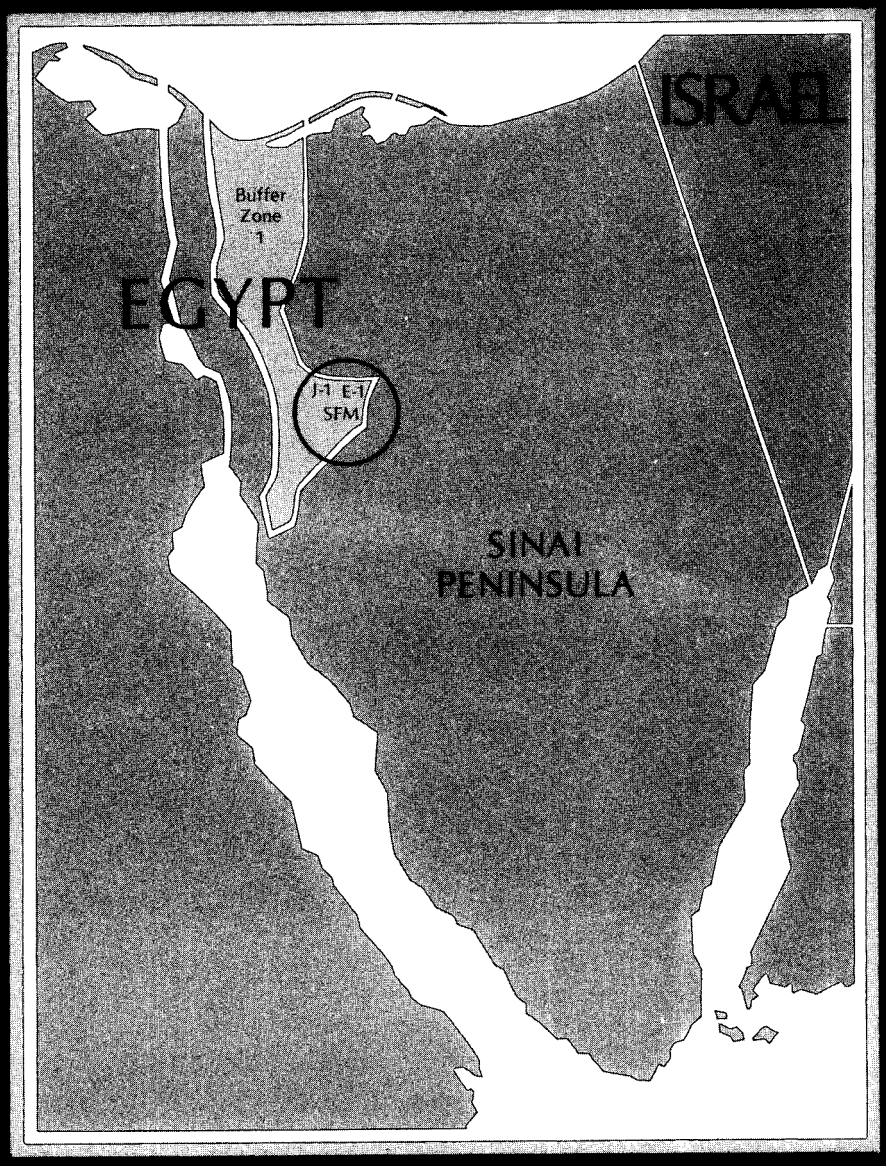
Watch in the Sinai

The
United States
Sinai Support
Mission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Introduction

By agreement between Egypt and Israel in 1975, the United States mounted a unique peacekeeping watch in the Sinai Desert. The American role, as Vice President Mondale phrased it, is to act as "the eyes and ears of peace": to detect any movement of military forces and thus to defuse any untoward incident at the strategic Giddi and Mitla Passes. The Washington-based headquarters of this operation is the U.S. Sinai Support Mission (SSM); its field arm is known as the U.S. Sinai Field Mission (SFM).

On a plateau among the hills of the Sinai, a chain-link fence encloses a compound of buff-colored cubes fitted together in rectangular patterns. Three smaller units, each in separate vigil, stand at critical points above the Passes. These buildings house the members and sophisticated technical equipment of the SFM. From the American camp, you need go no further than 1½ miles east to reach Israeli-held ground; a direct-line flight of 15 miles west would bring you to Egyptian-controlled territory. In the area between, the United Nations Emergency Force (UNEF) patrols a demilitarized buffer zone. Within that zone, the SFM keeps watch over the entrances to the Giddi and Mitla Passes and monitors the Egyptian and Israeli surveillance stations lodged on the heights at opposite ends of the Giddi Valley.

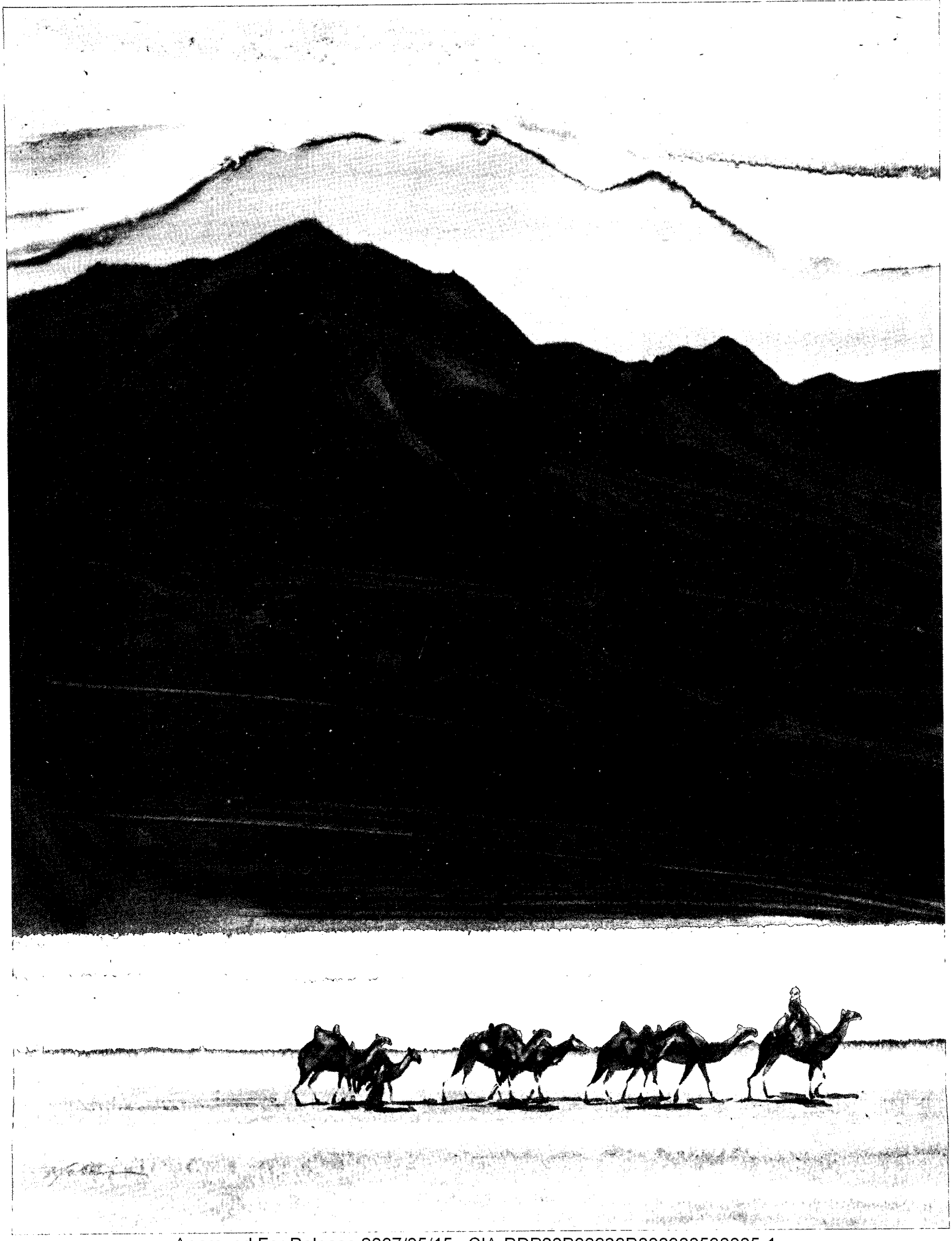
The U.S. *tactical* early warning system has a limited range and purpose. It complements Egyptian and Israeli *strategic* surveillance stations, which collect information about the movements of the other's military forces and whose far greater range provides a broader assessment of military preparations.

In September 1975, at the invitation of Israel and Egypt, and to facilitate the Sinai II Agreement for Israeli withdrawal, the United States agreed to assume this new fourth-party role in the Sinai. That role is not to enforce the rules—the function of UNEF—rather, the U.S. Sinai Field Mission stands watch to alert all parties of any apparent violation of the agreed interim peace terms within its area of surveillance. The use of technological devices enables the Mission to receive an accurate and steady stream of information.

The speed with which the Sinai Support Mission was established and the effectiveness of its performance resulted from the extraordinary combined efforts of the U.S. Government and its contractors. The United Nations and the Governments of Egypt and Israel willingly gave to the Mission that assistance and confidence essential to fulfilling its obligations.

At the request of SSM Director C. William Kontos, Dr. Allen H. Kitchens, Office of the Historian of the Department of State, prepared a detailed history—"The United States Sinai Support Mission, 1975–1977." The following summary account is based largely on his work.

Contents



Introduction

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Genesis of the U.S. Sinai Support Mission

Prologue to September 1975 Inhospitable and stark, the Sinai Peninsula bares granite mountains and hard desert flats to a scorching summer sun, to frigid winter nights, and to wind. Sudden rains can flood wadis with impassable streams, but water, when it falls, brings life again to the desert and faint touches of green to the landscape.

Largely untamed space, the Sinai's northwestern quadrant lies between ancient centers of population, a natural buffer that has been crossed by nomads, caravans, and armies since time immemorial. The Giddi and Mitla Passes, which traverse the highlands of the interior, traditionally have served as invasion routes between Asia and North Africa.

When, in 1948, Great Britain's Palestine mandate ended after 28 years, the State of Israel was declared in a portion of the mandate area. Arab armies, including an Egyptian force which moved through the Sinai into Palestine at Gaza, challenged but failed to overcome the new state. Israel emerged from the conflict with more territory than it initially claimed. In 1956, British, French, and Israeli forces invaded and briefly occupied Egypt's Sinai territory. They withdrew at the insistence of the United States and other U.N. members. From that time until 1967, U.N. observers monitored the uneasy armistice along Israel's borders. Contained though festering, the Arab-Israeli dispute burst again into warfare in June 1967, a war triggered by the withdrawal, at Egypt's request, of the U.N. presence in the Sinai.

View from a SFM watch station overlooking the Giddi Pass.

Through the Giddi and Mitla Passes of the highlands, an Israeli army poured westward to the flats below, a vast and vacant terrain ideal for tank warfare. The outcome of this June 1967 conflict saw Egyptians retreat west of the Suez Canal, leaving Israel to occupy the entire Sinai Peninsula as well as other Arab lands. Military defeat and territorial losses in 1967—added to pan-Arab grievances over Israel's emergence and gains in 1948—prompted Egyptians to project the reconquest of the Sinai as a national goal. In the atmosphere of continuing hostility, Israel built an electronic surveillance station on the edge of an escarpment near the western end of the Giddi Pass to warn of Egyptian preparations for an attack.

The northwestern Sinai plains again erupted with the sounds and scenes of battle when Egypt launched an attack in October 1973. Israel's possession of the Giddi and Mitla Passes, through which ran support lines to its tank battalions, then assumed vital importance. The initial cease-fire arrangement of October 22, 1973, found Israel still holding most of the Sinai. An Israeli force had also penetrated an area west of the Suez Canal to a point known as Kilometer 101, while some Egyptian units remained deployed in the Sinai east of the Suez Canal. A final cease-fire agreement, signed by Egypt and Israel on November 11, 1973, brought about a separation of the two armies and positioned a United Nations Emergency Force (UNEF) between them.

In the aftermath of the cease-fire, Israelis and Egyptians for the first time in some 25 years of belligerency engaged in direct discussions, albeit the participants were professional officers negotiating limited and specific details of military disengagement. On the basis of these talks at field quarters at Kilometer 101, the Governments of Egypt and Israel reached an interim accord, the Sinai I Agreement, in January 1974.

Early in 1975, at a seemingly favorable juncture, U.S. Secretary of State Henry Kissinger launched his intensive diplomatic effort to bring about a second agreement between the two governments which would sustain a more far-reaching armistice and thereby advance the possibility of resolving at least some of the larger political issues. The Secretary mediated between the parties for a period of 16 days, an effort which involved him in flying back and forth between Egypt and Israel and added the term "shuttle diplomacy" to international vocabularies.

Both protagonists, however, held to inflexible positions on a number of issues. Egypt insisted on Israeli withdrawal from the northwest quarter of the Sinai to a line east of the Giddi and Mitla Passes and on the return of the oil field at Abu Rudays. Israel recoiled at the idea of giving up the Passes, so indispensable in time of war, and claimed particularly the need to keep its electronic surveillance station at Giddi. Israel also wanted some concrete evidence of Egypt's peaceful intent. Their respective positions remained basically unchanged for a full year.

The impasse broke when, on March 29, 1975, Egypt's President Anwar Sadat announced that he would reopen the Suez Canal to international traffic and would approve a 3-month extension of the UNEF mandate beyond its April 1975 expiration date. To these overt gestures, Israel's Defense Minister, Shimon Peres, replied that Israel was ready to make "significant concessions" provided the canal was in fact reopened.

Egypt officially reopened the Suez Canal on June 5, 1975, the eighth anniversary of the June 1967 war. Before the end of June, the governments of both countries agreed to resume negotiations, again through the good offices of the United States, based now on a greater willingness to compromise. Arriving in Jerusalem on August 21, 1975, Secretary Kissinger confirmed that: "All parties have had an opportunity to reconsider their attitudes; sufficient progress has been made in the discussions during the interim to warrant a more intensive diplomatic effort in the days ahead."

The Sinai II Agreement The Sinai I Agreement of January 1974 served its purpose by narrowly separating the military forces of Egypt and Israel and providing a respite during which positions could be reviewed and attitudes reconsidered. Staff work on both sides continued during the period from January 1974 to the summer of 1975, and impetus toward renewing negotiations accelerated after President Sadat's June statements and Israel's response to them. The change in attitude justified Secretary Kissinger's round of shuttle diplomacy during the last 10 days of August 1975. The objective of a second interim agreement was to arrange a more extensive military disengagement in the Sinai, while encouraging political processes to move along peaceful channels.

Egyptians and Israelis accepted the proposal of a demilitarized buffer zone controlled by a United Nations Emergency Force (UNEF). The idea of adjacent zones, where each party could deploy only forces limited in number and weaponry, aroused no serious dissent. Israel was prepared now to relinquish most of the area of the Giddi and Mitla Passes for inclusion in the proposed U.N. Buffer Zone but declined to forgo its strategic surveillance station at the western end of the Giddi Pass. Accordingly, Egypt was allowed to build a similar station at the eastern end of the Pass. The United States agreed to conduct a limited oversight of the two electronic observation posts.

Israel, however, mistrustful of the Egyptians and remembering the United Nation's withdrawal of observers at the request of Egypt in 1967, suggested that the United States establish and maintain a tactical early warning system at the Giddi and Mitla Passes. Egypt concurred, and as negotiations proceeded, it became clear to Secretary Kissinger that no agreement would result without this explicit American role. He commented later (September 1975) that the United States agreed to build an early warning system at the request of both parties and not as the result of an American initiative. "In fact," he said, "I am giving away no secrets if I point out that we were not particularly anxious to play this role."

A Basic Agreement, known as the Sinai II Agreement, was initialed by the two parties at separate ceremonies in Jerusalem and Alexandria on September 1, 1975. Secretary Kissinger initialed the adjunct U.S. Proposal (for a tactical early warning system) on the same day. Formal signing of the Agreement took place in Geneva on September 4. The Basic Agreement contains four documents: the Agreement Between Egypt and Israel; an Annex to the Agreement; the U.S. Proposal; and a later Protocol to the Agreement, signed on September 22.

The provisions of the four documents which related to the future Sinai Support Mission included:

1 Creation of buffer zones entirely under UNEF control (Zone 1 in the northwest quadrant of the Sinai Peninsula; Zones 2A and 2B in the southwest quadrant).

2 Redeployment of Israeli and Egyptian forces by February 22, 1976: Israel withdrawing beyond the Giddi and Mitla Passes; Egypt controlling about 6 percent of the Sinai, including the Abu Rudays oil fields.

3 Designation of limited arms and forces zones on either side of Buffer Zone 1.

4 Provision for photographic reconnaissance flights by the United States over the areas covered by the Agreement, the resulting information to be made available to both sides and to the Chief Coordinator of the U.N. Peacekeeping Missions in the Middle East, and also for aerial reconnaissance by Egypt and Israel up to the median line of Buffer Zone 1.

5 A Joint Commission of Egyptian and Israeli representatives, under the chairmanship of the U.N. Chief Coordinator, set up to consider periodically any problems arising from the Basic Agreement.

6 An American early warning system within Buffer Zone 1, as set forth in the U.S. Proposal.

Buffer Zone 1 (hereinafter referred to as the buffer zone) extends some 82 miles from the Mediterranean Sea on the north to the Gulf of Suez on the south. Just south of the zone's midpoint, where its east-west dimension is the widest (about 35 miles), lie the Giddi and the Mitla Passes. Elsewhere the zone tapers to a 10-mile breadth. The western edge is about 10 miles distant from the Suez Canal.

A 2,000-foot escarpment dominates the 15.5-mile-long Giddi Pass. The Mitla Pass, 18.6 miles long, pierces hills ranging to 2,000 feet. Ten miles of a serviceable north-south road connect the two double-lane, east-west highways through the Passes. The surveillance of these roads is the basic U.S. responsibility. The total area monitored by the U.S. Sinai Field Mission thus measures about 240 square miles.

Four unmanned sensor fields, one placed at each approach to the two Passes, and three manned watch stations overlooking the fields assist the SFM in its work. The U.S. early warning system serves the dual purpose of providing tactical early warning, i.e., verifying access to the Passes, and of checking the Israeli and Egyptian intelligence facilities in accordance with restrictions contained in the Basic Agreement. The U.S. role in the Sinai was expected to continue for the duration of the Basic Agreement, that is, until the Agreement was superseded by a new pact or otherwise terminated. It was generally understood that the United States would maintain this role as long as the endeavor proved useful to assure compliance with the Agreement, furthered the progress of negotiations, and while the United States continued to enjoy the confidence and support of both parties.

The full package of the Sinai II Agreement relied upon an interlocking series of peacekeeping arrangements: Israel and Egypt, each with its respective surveillance station, would have strategic early warning capability. The U.S. early warning mission would provide tactical surveillance, monitoring the approaches to the Passes, and would verify operation of the two strategic electronic stations to assure compliance with limitation on numbers and kinds of personnel, vehicles, and weapons. The U.N. Emergency Force would enforce the prohibition against military development and fortifications within the buffer zone as well as monitor the limited forces zones. No one party carried the full burden of responsibility. Their integrated roles within well-defined, limited, and manageable geographic areas, despite some strains and stresses, have resulted in a remarkably efficient and satisfactory system.

With respect to the United States unusual watch in the Sinai Desert, on September 9, 1975, Secretary Kissinger said:

"The presence of 200 civilian Americans to assist with the early warning system in the small area of the passes is a limited—but crucial—American responsibility. It was not a role we sought. We accepted it at the request of both sides only when it became totally clear that there would be no agreement without it and only on carefully limited terms. We agreed because failure would have posed grave risks for the United States."

Later, on September 22, 1975, addressing the U.N. General Assembly, Secretary Kissinger added:

"The alternative [to the Basic Agreement] was a continuing stalemate which would have led over time to another war, creating a serious threat to world peace and the prospect of broad global economic dislocation.

"Neither fear of the future nor pride should obscure the fact that an unusual opportunity for further progress on all issues now exists. But opportunities must be seized or they will disappear. I want to emphasize that the United States did not help negotiate this agreement in order to put an end to the process of peace, but to give it new impetus."

Mr. Kissinger's next exercise in diplomacy was to persuade the Congress of the United States to approve the U.S. Proposal—a commitment to send American citizens into the Sinai Desert between two armies recently at war.

Congressional Approval On the day the Sinai II documents were initialed in Jerusalem and Alexandria (September 1, 1975), President Gerald R. Ford sent a letter to the Congress enclosing the texts of the U.S. Proposal, the Agreement between Israel and Egypt, and the Annex to the Agreement. The President's requests for approval and authorization of the U.S. Proposal were referred to the Senate Foreign Relations Committee and to the House Committee on International Relations.

Both congressional committees held hearings on the U.S. Proposal during September. Their discussions centered on the various assurances and understandings given to Israel and Egypt. Neither committee seemed inclined to act quickly on the U.S. Proposal. In the aftermath of the Vietnam experience, the committees were reluctant to court any remotely potential U.S. military involvement or any commitment that might appear to lead toward involvement, such as risking American civilian lives in a notably volatile region. In the meantime, the date—October 4, 1975—neared for the first redeploying of troops to implement the Sinai II Agreement.

Further delay in approving the U.S. Proposal chanced an upset of the Egyptian-Israeli agreement's 5-month-long timetable for the military redeployments. To do so could mean a return to the hazards of renegotiation. On September 29, 1975, President Ford wrote to the leaders of Congress urging them to "understand the consequences of further delay in acting on this important matter" and to complete action on the U.S. Proposal by October 3.

The House International Relations Committee on October 3 ordered House Joint Resolution 683 favorably reported to the House of Representatives.

The Senate Committee on Foreign Relations, however, queried Secretary Kissinger at a public hearing on October 7 on the need for a solely American operation, seeking reassurance of minimal risk. The Secretary recommended prompt and sympathetic action on the "President's request for approval of the stationing of up to 200 Americans in the Sinai—a request that has now been before the Congress for more than four weeks." He noted that the proposed American presence in the Sinai would be a limited but crucial American responsibility. The U.S. civilian volunteers would be charged solely with operating an early warning system in the small area of the Sinai Passes within the U.N. Buffer Zone. Neither combat personnel nor advisers to one side or the other, they would serve both parties impartially. They were to complement the UNEF military contingents—drawn from such countries as Canada, Finland, Ghana, Indonesia, Poland, Senegal, and Sweden—whose responsibility it was to patrol the U.N. Buffer Zone.

To allay congressional fears, Secretary Kissinger stated that a vote in favor of the specific, limited U.S. role in the early warning system would *not* "thereby commit the Congress to a position on any other issue . . . ." Congress was asked solely to approve the U.S. Proposal.

The Senate Foreign Relations Committee approved the text of House Joint Resolution 683 on October 7 and reported its action to the Senate.

The House of Representatives adopted the Joint Resolution (341-69) on October 8; the Senate approved it by a vote of 70-18. President Ford signed the legislation on October 13, 1975, as Public Law 94-110: "Joint Resolution To Implement the United States Proposal for the Early-Warning System in Sinai."

The Congress wrote certain caveats into the authorization. It specifically stated that P.L. 94-110:

- Did not signify congressional approval of any other agreement, understanding, or commitment made by the executive branch.
- Registered concern for the security of the American civilian volunteers by providing for their immediate evacuation should hostilities resume in the area or if the Congress by concurrent resolution determined their safety jeopardized or their presence unnecessary.
- Required the President to report to the Congress at least once every 6 months on the Sinai Mission's operations and on the feasibility of reducing or eliminating U.S. personnel by substituting foreign nationals or by making technological changes in the early warning system.

P.L. 94-110 of October 13, 1975, authorized the executive branch to proceed with the formidable tasks of organizing and implanting an operational complex in a distant desert.

Shaping a Mission While Congress deliberated the U.S. Proposal, Secretary Kissinger, as Assistant to the President for National Security Affairs, took the first step toward shaping an organization to field the early warning system in the Sinai. He issued a National Security Study Memorandum (NSSM 230, dated September 15, 1975) proposing an analysis of the nature, organization, and management of the projected mission. Copies were sent to the Departments of State and Defense (DOD), to the Agency for International Development (AID), and to the Central Intelligence Agency (CIA). Under Secretary of State Joseph Sisco invited representatives from these departments and the Office of Management and Budget (OMB), the Arms Control and Disarmament Agency (ACDA), and the Joint Chiefs of Staff (JCS) to form an *ad hoc* working group.

As a basis for discussion, Robert Oakley of the National Security Council (NSC) and Frank Wisner of the State Department drafted a response to NSSM 230. They made three basic proposals:

1 The field mission in the Sinai should report to a single official in Washington responsible for management and logistical support, who would receive policy guidance from the Department of State.

2 The organization should possess sufficient authority and flexibility to draw upon U.S. Government resources across departmental lines and to contract for services from the private sector.

3 The field mission should not exceed 200 people and be manned exclusively by American civilians not presently assigned to DOD, CIA, or National Security Agency (NSA). About 75 people would actually be on duty at the field stations at any one time, while the balance would be operating from a base camp in an inhabited area in Israel or Egypt.

The Oakley-Wisner draft suggested that appropriations for the establishment, operation, and maintenance of the Mission could legally be drawn from the Foreign Assistance Act of 1961, as amended. Either Security Supporting Assistance funds or the Middle East Special Requirements Fund or a combination of the two might be used.

An annex to the draft study proposed other operational criteria. Dependence upon Egypt and Israel for logistical support should be minimized. The Mission in the Sinai should function as a self-contained entity with logistics, transport, maintenance, communications, and other services contracted to the private sector. An independent communications network should link the Sinai with Washington, Egypt, Israel, and the U.N. headquarters in Jerusalem. The draft's timetable suggested that a site survey be completed in October and that construction teams be in place by December 1975.

The study raised two major management questions: (1) whether responsibility for managing the new organization should be assigned to an interagency group or to a single agency and, if the latter, to which one; and (2) the extent to which field operations might be contracted outside the government. Management responsibility could reasonably be assumed by State, AID, or ACDA if the single agency choice were made. Neither the Department of Defense nor the CIA was a likely candidate, although both possessed the technical capability and experienced personnel, because of the restrictions imposed by P.L. 94-110 and by the War Powers Resolution of November 7, 1973, forbidding U.S. military personnel to enter a foreign zone of hostilities.

The alternative to a single agency would be an interagency management group that included representatives from State, AID, ACDA, and perhaps others.

Contracting for services to meet governmental needs when and where possible is a longstanding U.S. Government policy. There were compelling reasons to do so in the case of an early warning system in the Sinai. First, no agency of the U.S. Government, other than the DOD and CIA (excluded from participation in the field), possessed the necessary resources and expertise, whereas many well-known private firms were equipped to handle most aspects of the proposed Sinai Mission. Secondly, the U.S. early warning system had to be fully operational by February 22, 1976, when the final redeployment of Egyptian and Israeli forces would take place. Given this extremely tight schedule, the speed with which private industry can move when necessary argued persuasively in favor of contracting. Moreover, Secretary Kissinger preferred that a U.S. Government presence in the Sinai be kept to a minimum consonant with congressional intent.

On September 19, Mr. Sisco convoked the first meeting of the *ad hoc* working group[1] to discuss the Oakley-Wisner draft, i.e., the organizational concept of what was now dubbed the Sinai Support Mission. Two more meetings of the working group and further revisions produced a final draft, forwarded to Secretary Kissinger on October 6, 1975.

Secretary Kissinger thought that vesting policy determination in the Department of State would too clearly create the appearance of the Mission as a U.S. political instrument and tend to negate the neutrality of its purpose. Further, he was convinced that interagency participation in determining policy would ensure prompt cooperation from the various government departments whose resources would be tapped. He therefore recommended to the President that an interagency board preside over the creation of the SSM and thereafter be available for guidance as needed, while the future SSM director should report to the President through the National Security Council.

With this revision, the response to NSSM 230 went forward to the National Security Council on November 1, 1975. It reemerged on November 14 with the President's approval as National Security Decision Memorandum (NSDM) 313—"Establishment of the U.S. Sinai Support Mission."

As described in NSDM 313, a Sinai Interagency Board was to provide overall management assistance, coordination, and advice. Its member agencies were the Departments of State and Defense, AID, ACDA, and the CIA. Board meetings would be called by a Board Chairman—the SSM Director. Beyond the initial organizing stage, the Board's close participation could be expected to diminish.

Holding the additional title of Special Representative of the President, the SSM Director in Washington reports to the President and receives policy guidance from him through the Assistant to the President for National Security Affairs. He also receives general direction from the Secretary of State.

The Oakley-Wisner response to NSSM 230 determined that authority to establish and fund the proposed Sinai Support Mission could be derived from Section 531 of the Foreign Assistance Act of 1961, as amended. An estimated $10 million would be required in startup costs; annual operating costs would be about $10 million. Thus, $20 million was requested in the FY-1976 Congressional presentation to establish and operate the U.S. Sinai Mission for 1 year. This funding was provided from the Middle East Special Requirements Fund of the Security Supporting Assistance portion of the Foreign Assistance Appropriations Act.

Early Planning and Organization

The study commissioned by NSSM 230 outlining the nature, scope, and size of the future Sinai mission went to the White House for approval on November 1, 1975. Under Secretary of State Sisco, General Alexander Scowcroft of the NSC, and Deputy Under Secretary of State Lawrence S. Eagleburger then began preparations for constructing such a mission. To direct the planning efforts of the *ad hoc* working group, Mr. Eagleburger appointed Clayton E. McManaway, Deputy Assistant Secretary of State for Management.

The U.S. Proposal prescribed the geographic limits and the purposes to be served by the Mission, specifying installation of manned watch stations and remotely controlled sensor fields. The Mission's technological nature required skills and equipment uncommon to U.S. civilian agencies. Given this handicap and no more than 5 months lead time (October to February 22, 1976), some contractual arrangement with a U.S. private firm appeared the most feasible option. The Sinai undertaking, however, was an immediate U.S. Government responsibility. Government personnel therefore had to direct the Mission.

Mr. McManaway's planning group distinguished three personnel categories for the field operation:

1 A small management staff of the Department of State, AID, and U.S. Information Agency (USIA, later U.S. International Communication Agency, USICA) employees equipped with political skills and area experience to coordinate the Mission's activities and to act as liaison officers with Egyptian, Israeli, and U.S. authorities. Their role would include occasional inspection of the nearby Israeli and Egyptian surveillance stations and a check on access to them.

2 About 75 contract technicians to operate and maintain the U.S. early warning system.

3 A supporting force of about 50 persons contracted to handle procurements, maintenance, personnel services, and other administrative matters.

Mr. McManaway's planning group drew up a staffing pattern for both the Washington staff and the Sinai Field Mission and for the latter outlined specific duties, functions, and contingencies. One of the personnel questions—whether or not military or intelligence officers could be assigned in *any* capacity to work with or on the SSM—was answered by the Department of State's Acting Legal Adviser, George Aldrich, on November 10, 1975. To be consistent with the War Powers Resolution, the legislative debates preceding the Joint Resolution (P.L. 94-110) approving the U.S. Proposal, and with statements by executive branch spokesmen, active military, intelligence

community, or Defense Department personnel could *not* be sent to the Sinai as participants in the operation of the early warning system. A distinction might be drawn, however, between "participation in" and "establishment of" the system which would permit active duty personnel to be sent to the Sinai until the Mission's activities officially began. Retired military or intelligence personnel could be employed by the SSM in the field provided they had not retired for that purpose and provided their retirement occurred before October 13, 1975, when P.L. 94-110 was adopted.

Many of the planning details on equipment and budget estimates had to await the results of an on-site survey. Early decisions had to be made, however, either to use a single contractor or multiple contractors; to negotiate a single source contract or award a contract on an open competitive basis. One of the initial planners, Major Marshall Carter of AID, had suggested in early October that dealing with a single contractor would confer the advantage of clarity and ease the problems of coordination and authority for the field mission director, even though certain portions of the firm's functions might be subcontracted. In addition, the time was too short to prepare specifications and a statement of work for more than one Request for Proposal, and the February operational deadline was more likely to be met by means of a single contract. Based on these arguments, the decision was made in mid-November to enter into a single contract.

Six to 8 months are normally needed to complete competitive procurement for a contract of comparable magnitude and complexity. Adequate authority, however, existed under procurement regulations and statutes to negotiate a single source contract as a time-saving option. Nevertheless, the SSM planning group concluded that the competitive procurement process could be compressed into about 6 weeks—largely because the number of firms that could qualify for the Sinai venture was limited and could be identified within a short time. Several firms whose qualifications and capabilities were generally known already had expressed interest in the project.

Intensified Planning The SSM planners intensified their activities when they received the National Security Council's decision (NSDM 313) on November 14. Experts assembled from various agencies to staff specialized working groups and addressed questions of communications, surveillance systems, and contracting procedures. Everyone occupied with the project devoted long hours of dedicated work to move the SSM successfully toward operational status by February 22, 1976, only 3 months away.[2]

To meet the February deadline Mr. McManaway now considered it necessary to augment the working groups and to invoke interagency assistance for that purpose. He therefore recommended to Mr. Sisco and Mr. Eagleburger on November 18 that a Sinai Interagency Board[3] convene to stimulate the additional backing needed to launch the Mission. In the absence of a Mission director, Mr. McManaway suggested that Mr. Sisco chair the meeting to emphasize the political importance and priority given to the Mission and the State Department's leading role.

At the Board's meeting on November 24, Mr. Sisco described the organizational decisions taken thus far and the measures proposed to realize a Sinai Support Mission. He also announced the appointment of Nicholas G. W. Thorne, a Foreign Service officer and former Marine Corps colonel, as Director of the Sinai Field Mission. The Board discussed a prospective ground survey in the Sinai, operational and contractual concepts for the SSM, the composition of working groups and of future Washington and field staffs, support requirements from each member agency, and the need for high-level technical advice. The members of the Board approved the projected operational and organizational concepts as developed and agreed that their respective agencies would assign additional personnel to the working groups.

By the end of November, the shape of the Sinai Support Mission had emerged. The projected early warning system had passed congressional scrutiny to be embodied in P.L. 94-110. It enjoyed Presidential sanction through the National Security Council's Decision Memorandum 313. A Sinai Interagency Board ensured the attention and cooperation of government agencies concerned. A dedicated work force of borrowed specialists and one SSM appointee, the director of its field branch, labored to fulfill the terms of the U.S. proposal. SSM had entered into an arrangement with AID—through a Participating Agency Services Agreement—for that organization to provide administrative support.

But the emerging Mission possessed no independent legal standing. Larry G. Pendleton, Jr., from the National Aeronautics and Space Administration (NASA), suggested to Mr. McManaway on December 3 a formal incorporation of the SSM as an independent entity by means of an Executive order. Mr. Pendleton argued that without such a formal designation, the SSM lacked the requisite legal authority to proceed with outside contractual arrangements.

Prepared by Mr. Pendleton and a working group, a draft Executive order was approved by members of the Sinai Interagency Board and was forwarded to General Scowcroft at the NSC. A covering letter explained that only an Executive order could confer on the SSM Director the combination of authorities (contractual, financial, and personnel management) required to carry out the Mission's objectives. The President was also asked to waive in the Executive order the application of certain statutes governing contractual arrangements between U.S. agencies and the private sector. The waiver would permit, for instance, SSM to let a contract without competition.

Approved by the Office of Management and Budget and the Attorney General of the United States, the proposed order was submitted to the White House for signature in the second week of January 1976. On January 13 President Ford signed Executive Order 11896, "Establishing the United States Sinai Support Mission." (See Appendix A, page 37.)

Choosing a Staff On January 15 President Ford announced the appointment of C. William Kontos, a senior AID officer with experience in management, foreign diplomacy, and interagency relations, as Special Representative of the President and Director of SSM.

The appointment of Mr. Kontos concluded several months' search. Initially, a person of recognized stature from outside government had been sought, but as publicity given to the Mission during congressional hearings faded, the desirability of a public figure seemed less pressing while the urgency of time increased. Recruitment then shifted to knowledgeable candidates from within government.

Mr. Kontos had previously served as Director of the AID Mission to Pakistan, Director of the Joint State/AID Office for Nigerian Affairs, Director of Program Evaluation for AID, Director of the 1974 Cyprus Task Force, and was at this time a member of the Department of State's Policy Planning Staff.

For up to 5 months, personnel involved in the organizing effort had been on loan, an arrangement which could not be continued indefinitely. The SSM now required a permanent staff. Most of the State-AID experts in foreign affairs, administration, and financial management who had been associated with the project from its inception were now detailed to SSM on a reimbursable basis. Clerical personnel were similarly assigned. Others, e.g., technical experts in fields not normally part of the staffs of foreign affairs agencies, were transferred from NASA and the Department of Defense to positions in AID and then detailed to SSM. These arrangements enabled the Mission to avoid creating new positions and to operate as a temporary agency, its lifespan linked with the duration of the Sinai II Agreement.

The size—28 positions—and composition of the U.S. Government field component was to be determined by the scope of U.S. Government responsibility for management, secure communications, and oversight of the two surveillance stations. Some of these functions would require round-the-clock, 7-day-a-week staffing. The field staff would consist of volunteers from the State Department, USICA, and AID. The State Department's Bureaus of Personnel and of Administration drew up a set of comprehensive proposals to govern the specific conditions and entitlements of U.S. Government employees at this special overseas post. Implementation of these proposals was approved by State, AID, and USICA.

Two possible approaches to staffing the Washington headquarters were considered: to use government personnel entirely or contract certain functions to consultants. A staffing pattern of 23 positions, including supervisory personnel to oversee prime contractor performance during the building of facilities and the installation of equipment, characterized the first alternative.

Under the second option, technical oversight of the prime contractor performance might be contracted out to a firm specifically organized to provide technical advice and management expertise to the U.S. Government and industry, leaving other key supervisory functions—contracts officer, budget and fiscal, etc.—in government hands. Adopting the second alternative would result in nine fewer (23 to 14) staff positions at headquarters. This option offered the double advantage of reducing SSM dependence on the Department of Defense and the intelligence community for essential technical expertise and of allowing SSM to secure the services of qualified people almost immediately (a doubtful possibility under alternative one in view of the relative slowness and difficulty of obtaining appropriate U.S. Government personnel from other agencies on a long-term basis). The arrangement would also permit the government to end the consultancy when the construction and installation phases were completed and the need for consultative oversight ceased.

Despite the disadvantage of a higher initial price tag—$500,000 for the year over and above the cost of an all-U.S. Government staffing—Mr. Kontos and Mr. McManaway recommended the consultancy choice. Mr. Sisco and General Scowcroft approved and SSM signed a contract with the nonprofit MITRE Corporation on January 16, 1976. A headquarters staff ceiling of 14 was increased by one more government position—an engineering director to provide overall technical direction of the program, including technical guidance of the consultants, and analyses to determine any required changes in the early warning system.

Site Survey and Technology Without specific knowledge of the physical characteristics of the early warning area, the several groups working to organize the Sinai Support Mission could not complete documents describing the requirements of the job to prospective contractors. A survey team of technical specialists and officers familiar with the terms of the U.S. Proposal left for the Sinai in the first week of December 1975.

The members of the team were to survey the area of the Mitla and Giddi Passes, ascertaining technical and logistic requirements. The team would determine exact locations for the three watch stations, the supporting base camp, and the four sensor fields. It would collect data on which to base the selection of appropriate equipment and would designate routes for communications links. In addition, the team was to brief American Embassy officials in the region and solicit the views of Israeli, Egyptian, and UNEF authorities toward working relationships with the field mission.

The survey team headed by Field Director Nicholas Thorne reached Cairo on December 3.[4] It included NSA and DOD technical specialists because of their relevant experience and immediate availability—considerations important to the urgent need for data to prepare contract specifications. Their participation rested on the legal distinction made earlier that Defense personnel could assist preliminary work on the early warning system, but not on its later operations. Nevertheless, as a courtesy, Chairmen of the Senate Foreign Relations Committee and the House International Relations Committee were told of the survey team's composition and purposes.

The team was divided into two groups—a management/logistics group led by Mr. Thorne and a technical group headed by Charles L. Stiles of NSA. The management/logistics group considered administrative aspects of the SSM's responsibilities, operations, and requirements in the field. These included personnel questions such as passport and visa requirements, buffer zone entry/access permits, privileges and immunities, logistic problems such as transport and road conditions, the clearing of mine fields, and physical security.

The technical group spent 3 days surveying the area of the Passes by air, vehicle, and on foot. They considered the technical aspects of establishing a communications network, an electronic warning system, and the locations of the base camp, watch stations, and sensor fields. They determined distances between all these points as well as between the base camp and the Israeli/Egyptian surveillance stations, line-of-sight paths for communications, proximity to existing roads and airfields, soil characteristics, and—not least important—the availability of water.

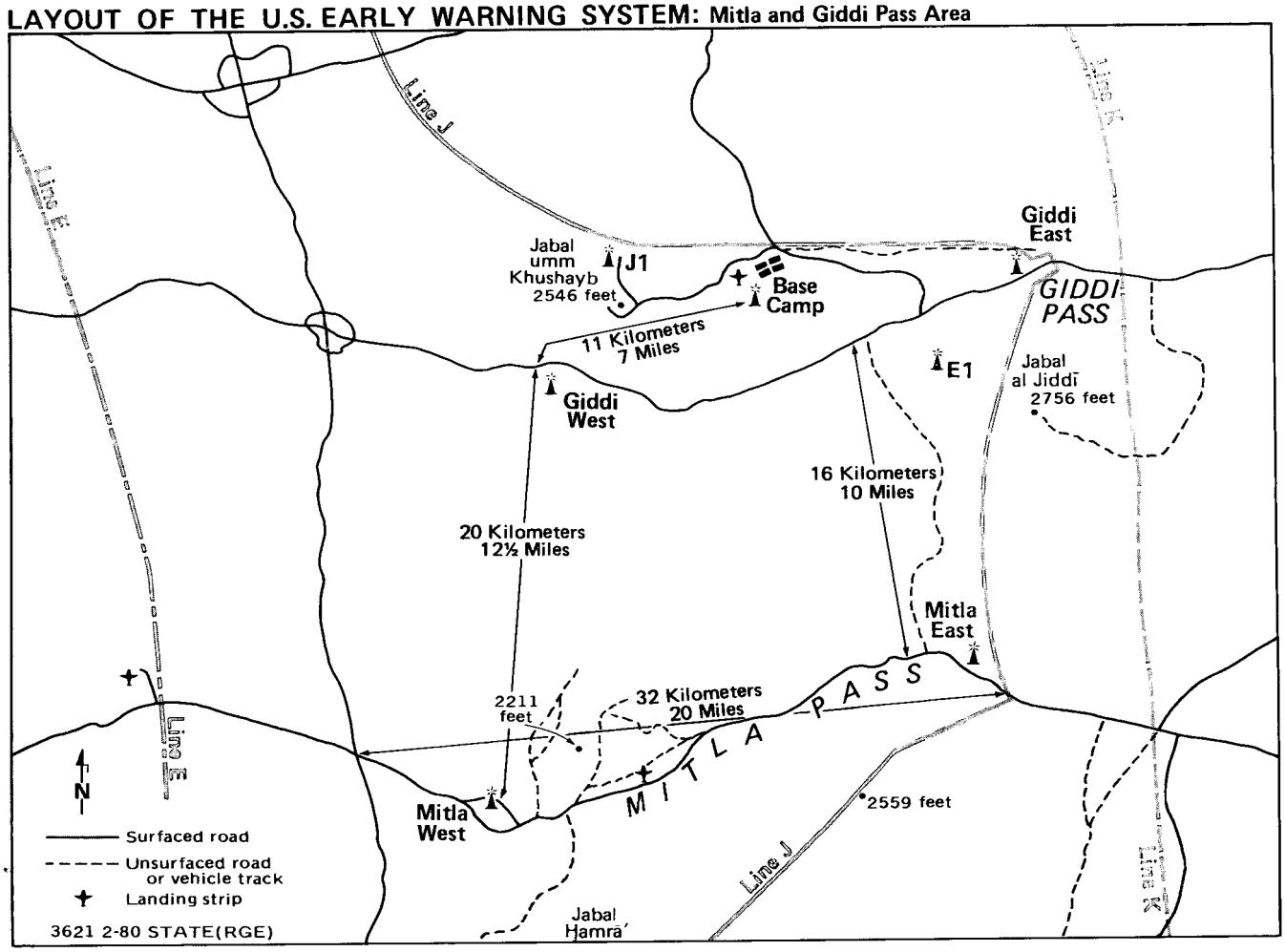
At Cairo, Ismailia, Rabah (in the Sinai), Tel Aviv, and Jerusalem, the survey team met with a large number of American, Egyptian, Israeli, and U.N. officials.[5] All were prepared to cooperate fully.

The U.N. Emergency Force based at Ismailia assumed responsibility for maintaining the roads. Limited administrative and logistical services were offered to the Mission as needs arose. The latter included major vehicle subassemblies and critical repair parts; wrecker and towing services; truck deliveries of liquid and bulk cargo, fuel, water, food; and emergency medical facilities.

The Israeli Defense Force (IDF) offered to provide water for base camp and watch stations via existing IDF pipelines in the Passes. The location of this waterline became a major determinant in siting the base camp. Two nearby airfields at Rafadim and Bir al-Thamada would be available to the Sinai Field Mission. The IDF also agreed to clear mines from designated areas and to turn over for SFM use an antenna tower and water tank in the Mitla Pass.

Egyptians offered the use of an airfield at Ismailia. They were willing to construct a new water pipeline to the watch stations in the Mitla Pass. Both Egyptians and Israelis made medical facilities in their countries available to SFM personnel.

LAYOUT OF THE U.S. EARLY WARNING SYSTEM: Mitla and Giddi Pass Area



Area encompassed by U.S. early warning system.

Egypt asked for a link between the SFM and the Ministry of War in Cairo to match the Israeli request for a direct communications channel with its Defense Ministry Liaison Office in Jerusalem. Egypt suggested Ismailia as the site of the base camp but, recognizing that supplies and other support would have to come from both Egypt and Israel, General Muhamad al-Gamasy, Minister of War, assured the survey team of Egypt's full cooperation at whatever site was chosen.

The survey team selected a high plateau on an escarpment in the northern part of the early warning area for SFM headquarters. Near the Giddi Pass road, between the Israeli and Egyptian surveillance stations, the site lies less than a mile from a landing strip and close to a paved access road that leads from the Giddi road to Jabal umm Khushayb (i.e., the Israeli station). Road construction, therefore, could be kept to a minimum. Moreover, the base camp would be about 3 miles from a future U.N. checkpoint and would have line-of-sight communications capability to UNEF headquarters at Ismailia.

Under the U.S. Proposal, the United States is required to report on troop or other military movements into the Giddi and Mitla Passes. Watch stations and sensor fields for monitoring the approaches to the two passes were so placed as to maximize their capabilities. Surveillance would be limited by the range of the sensors and the line-of-sight observation from watch stations.

The Egyptians accepted the survey team's site choices for base camp, watch stations, and sensor fields. The Israelis raised no objections to the first two but asked that the sensor fields at the western approaches to Giddi and Mitla be moved farther west. They argued that the fields should be placed along the eastern side of the intersections where each road through the Passes crosses the main north-south road. The north-south road lies about 3 miles west of both Passes. The Israelis asserted that, since they had agreed to the presence of an Egyptian surveillance station virtually on the Israeli edge of the buffer zone, moving the SFM sensor fields west to the nearest road junctions would provide tactical

symmetry and a somewhat earlier warning, important to Israel in the event of a UNEF withdrawal.

Acting on instructions, Mr. Thorne informed Israeli Defense Minister Shimon Peres that the areas and coordinates surveyed by the U.S. team had been designated by the two parties at Geneva. The site survey, therefore, proceeded on the assumption that the locations for the sensor fields had been settled, subject to minor adjustments for technical reasons. No technical rationale justified moving the western sensor fields from their proposed locations at the Passes, nor did there seem any substantive technical or military advantage to be gained from the change proposed by Israel. The suggestion would, however, have altered the U.S. role in the early warning system from a *tactical* to a *strategic* one. The U.S. Proposal did not allow for a strategic early warning system.

While still in the Middle East, the survey team sent a preliminary report to the SSM working groups preparing the document inviting contract proposals. The team's report provided precise coordinates for all of the sites identified and most of the information and specifications needed.

With the data available SSM planners turned to considerations of equipment, procurement, and cost estimates. The only practical way to meet the February 22 deadline—it was now mid-December—and the surest technical route to procuring the sensor and communications systems needed was to obtain the equipment and accessory training from government sources, particularly from the Departments of Defense and State.

SSM planners compared DOD's inventories of sensor devices and related read-out equipment with the survey team's analyses of terrain, soil, fauna, and seismographic tests for each of the watch stations and sensor fields and selected the most appropriate combination of available sensors. In December the SSM through NSC asked the Department of Defense to supply specific kinds of sensors and related equipment and to train operators to use and maintain them. The latter tasks were assigned to the U.S. Army Mobility Equipment Research and Development Center (MERDC) at Fort Belvoir, Virginia. By the end of January 1976 the needed equipment had been assembled from Army depots across the United States as well as from various civilian contractors and readied by the Mission's prime contractor for shipment to the Sinai.

Most of the sensors chosen had been used in Southeast Asia, with the exception of a strain sensitive cable device developed by MERDC. The MERDC sensors, originally designed for 60-day batteries, were modified to operate with long-life batteries of up to 18 months' duration. The SSM and MERDC designed a system that would limit maintenance to replacing batteries and electronic modules. SSM stocked a year's supply. During February training to use and care for the equipment was scheduled at Fort Belvoir for technicians employed by the prime contractor.

The State Department's Office of Communications organized SSM's administrative communications system. Two plans were drawn up in November 1975: a "Quick Reaction Plan" and a "Long Range Permanent Plan," with the latter put into use on July 1, 1976. The "Quick Reaction Plan" included a "Can-Do" kit of radioteletype/cryptographic equipment available from the State Department and easily transportable, as well as a self-contained, transportable tactical communications system consisting of high-frequency (HF) transmitters, antennas, emergency power, and vans which could be borrowed from the U.S. Army or Air Force. The "Quick Reaction Plan" served the Sinai Field Mission from its February inauguration until, on schedule, the permanent equipment went into operation.

Contracting With Private Enterprise To safeguard the integrity of the government's procurement process, open competition in choosing a private firm to perform contracted work for a government agency is generally required. Although the SSM was authorized to make certain exceptions under Executive Order 11896, SSM planners preferred and time just allowed the usual competitive route. Accordingly, a notice of an intent to contract was published in *Commerce Business Daily* on December 5, 1975.

Such a public notice contains a synopsis of the proposed contract, its requirements and schedule, and invites firms to express interest in bidding and to cite their qualifications. The SSM notice, asking for response from interested firms by December 15, outlined the project as follows:

> The contractor will be required, with U.S. Government coordination and guidance, to install, operate and maintain the intrusion detection systems and watch stations in the Giddi and Mitla Passes. The contractor will be required to provide the necessary manpower and logistic support for the installation of the necessary facilities—including housing for as many as 150 persons—and to assure that the continuing mission functions are performed at all times.

While the survey team collected on-site data, a procurement working group began drafting a Request for Proposal (RFP).[6] This formal document describes the proposed project and the requirements anticipated. The site survey team provided the specifications and RFP No. ST-76-21 was ready for review by the Sinai Interagency Board on December 19. The package contained an explanation of the RFP, specific instructions for preparing the proposal or bid, a *pro forma* contract, technical and business management proposal requirements, evaluation factors, and general provisions for complying with such national goals as equal employment opportunity and fair labor standards. To qualify for consideration, an offeror had to present previous recent experience in systems and logistics management and experience at installing, operating, and maintaining electronic sensors. The terms of payment offered a combination fixed rate and cost plus fixed fee to reflect the fact that not all costs could be accurately determined.[7]

The RFP cited a two-phase timetable: full operational surveillance capability by February 22, 1976, and full contract implementation by July 1, 1976.

SSM provided the RFP on December 20 to the 46 firms which had expressed an interest in the basic support contract or in subcontracting opportunities. Industry representatives were invited to a preproposal conference at the Department of State, set for December 23, at which they would have an opportunity to seek further information on any aspect of the project or contract.

Following the preproposal conference, SSM planners made appropriate revisions to the RFP and completed a source selection plan. SSM adopted a two-phased work schedule that gave priority to achieving full operational capability by the February 22 deadline and secondary importance to completing permanent facilities by July 1, 1976. The first phase included selecting the contractor, negotiating and awarding the prime contract, installing sensor and communications equipment, and constructing temporary quarters. The second phase called for completing the permanent base camp and three watch stations.

SSM modeled its procedure for selecting a contractor on the basis of the NASA Source Selection Board Manual and on Department of Defense source selection procedures. A meticulous SSM Source Selection Plan, approved by its Interagency Board on December 30, described the organization to be set up to do the selecting; the process for evaluating proposals; rules of conduct for evaluators; a schedule for the entire procurement process; a detailed numerical scoring plan; and a narrative description of evaluation factors to be used.

Eighteen specialists from 10 different government agencies[8]—6 from the SSM task force, 12 recruited from other agencies—were divided into three completely independent groups to evaluate the technical, management, and cost factors of the proposals submitted. Using well-established NASA and DOD procedures, the three teams analyzed, scored, and ranked assigned sections of each proposal by a predetermined weighting system, i.e., degrees of acceptability measured against the requirements of the RFP. The Technical Evaluation Team dealt with technical acceptability in communications, operations, facilities, plans to meet deadlines for full surveillance capability, and for full contract implementation, logistics, and surveillance systems. The Management Evaluation Team reviewed the overall management plan—responsiveness to RFP requirements, key management and technical personnel proposed, company resources, capability, experience, and past performance. The Cost Evaluation Team evaluated each proposal to establish: (1) the firm's fixed price and price realism for personnel, and (2) the realism of the cost plus fixed fee portion of the contract relating to materials and services.

Final Selection The teams started work on January 5 when six proposals were received from industry. By January 10, their preliminary findings had been submitted to the Source Evaluation Committee which, after further consideration, eliminated three of the proposals. To the remaining three bidders—the BDM Corporation, E-Systems, Inc., and Kentron Hawaii, Ltd.—the Committee addressed additional questions. Based on their responses, oral presentations, and discussions and after receiving "best and final" offers, the Committee combined the assessments of the evaluation teams with its own review and recommended on January 13 that the contract go to E-Systems, Inc., of Dallas, Texas.

E-Systems, Inc., is an international electronics and aircraft systems company engaged principally in developing and producing electronic systems and products and in furnishing related technical services. Its six domestic divisions and three wholly owned subsidiaries employ about 10,000 persons in 10 States and 49 countries. Sales in 1975 approximated $250 million.

SSM's Evaluation Committee concluded that the E-Systems proposal met the requirements of the RFP at a reasonable cost and with the lowest risk of failing its commitments. In addition, E-Systems proposed to use no major foreign subcontractors, thereby reducing the risk of complications; in contrast, the other proposals included some foreign subcontracting. Another important factor in the selection of E-Systems was its choice of the H.B. Zachry Company of San Antonio, Texas, as principal subcontractor. Zachry is a major construction company with 50 years' experience on varied and worldwide construction projects.

The key to meeting SSM's deadlines of February 22 and July 1 lay in the ability to construct buildings quickly. Zachry proposed to use "Kelly Klosures" for temporary housing. Moreover, in San Antonio Zachry had in stock fully equipped, pre-cast, reinforced concrete modules for permanent housing. Originally intended for a motel in Florida, they were self-contained units to which could be added screened porches and interconnecting roofs and walkways. The modules could be transported without serious difficulty despite their weight of 35 tons each.

In addition to the Zachry subcontract, E-Systems planned to subcontract with World Airways to transport critical equipment and materials to Israel to be moved to the Sinai. Zachry planned to subcontract its responsibilities for food, janitorial and laundering services, and supplies with the ITG/Manpower Corporation. E-Systems assigned responsibility for the Sinai Mission's program management to its Greenville Division at Greenville, Texas.

Following review of the prospective contract award by the Sinai Interagency Board, contracting officer Gerald John concluded final negotiations with E-Systems. On the ceremonial day of his appointment (January 15, 1976), SSM Director Kontos sent word of the impending contract award to the Chairmen and ranking members of the Senate Foreign Relations and Appropriations Committees and/or the House International Relations and Appropriations Committees, as well as to members of the Texas Senate and House delegations. The SSM Director and E-Systems President, John W. Dixon, signed the contract at the Department of State on January 16, 1976.

The January 16 contract was a letter contract based on the E-Systems proposal; that is, a preliminary contractual agreement on the total estimated cost and fee including the cost of startup work. Both industry and government personnel conversant with the project lacked experience and reliable cost data for what was a unique undertaking. To enter a firm contract at the beginning might expose the government to understandable, but nonetheless insupportable, cost contingencies. Later, after experience gained during the intial months, an audit of the contractor's proposal by the Defense Contract Audit Agency, and intensive negotiation by SSM and E-Systems, the letter contract was replaced by a formal contractual document, signed on June 15, 1976, for performance through September 30, 1976. Subsequently, this was extended through March 31, 1977.

E-Systems' total estimated cost, as revised in June 1976, amounted to $16,004,599, covering the period from January to September 30, 1976. SSM had obligated $21 million for all services during the startup and construction phase through the month of June ($18.9 million for construction, engineering, equipment, transport and operation; $2.1 million for U.S. Government administration). During the transition quarter, July 1–September 30, additional expenses of $9 million were anticipated ($7.8 million for construction and operations; $1.2 million for U.S. Government administration). Actual total obligations from the inception of the SSM through September 30, 1976, were $29.7 million. Of this amount, $25 million funded the contract with E-Systems through March 1977.

Building the Buffer Zone

Phase I Within a day of the contract signing on January 16, 1976, the State Department's Directors of Egyptian and Israeli Affairs briefed U.S. Government and E-Systems personnel on the Middle East scene. Twenty-eight persons from State and AID had already been chosen for duty at the Sinai Field Mission. On January 18, communication specialists in the group started training to use DOD equipment.

Two SFM liaison officers flew to Tel Aviv on January 10 to make arrangements for the arrival and immediate quartering of an advance party at Israeli camps in the Giddi Pass, for landing cargo planes at Ben Gurion Airport near Tel Aviv, and for Israeli assistance in coordinating the unloading of planes and movements of personnel and cargo. Movement into or out of the Sinai had to be cleared with Israel and accompanied by an Israeli military escort. Until redeployment on February 22 in what later became part of the U.N. Buffer Zone, the Israeli Defense Force (IDF) controlled the Passes and adjacent territory.

Vehicles prepared for loading in Greenville, Texas.

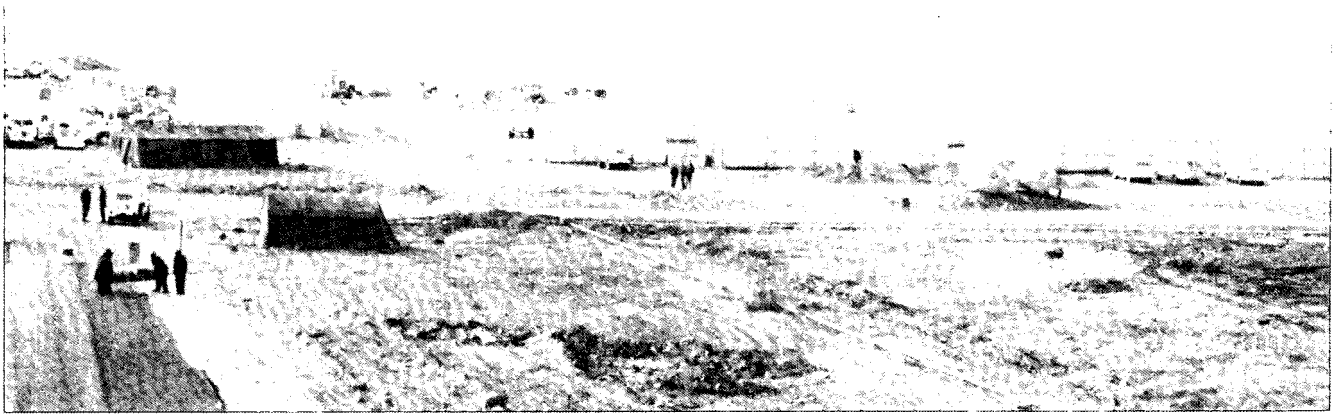
On January 20, 10 U.S. Government and 21 contractor members of the advance party reached Tel Aviv. The first of seven Boeing 747 charter flights from Greenville, Texas, delivered 187,000 pounds of cargo the next day. Included in the first shipment were earthmoving equipment painted a characteristic yellow and trucks, jeeps, and trailers painted white with the Sinai Field Mission initials "SFM" boldly lettered in black on the sides. There were electric power generators, construction materials of all kinds, a mobile field kitchen, and packaged foods.

A convoy of carriers with 21 Americans and an IDF escort traveled to the Sinai base camp site. It was met by the advance party from Washington, which had been flown to a nearby airstrip in two small IDF aircraft. This team came to confirm preliminary details, such as those of site locations and immediate housing for the American construction crews at the headquarters of an Israeli tank battalion in the Giddi Pass area. (Some lived in tents on location.) The advance team chose to place the Phase I temporary base camp near the battalion headquarters and adjacent to what would become U.N. Checkpoint Bravo. Work began as soon as they arrived in the desert on January 23, 1976. Grading and leveling earth at the camp site were well underway before the coordinating team moved on to Cairo for talks with officials. Construction proceeded thereafter at a breakneck pace, often at night under floodlights.

By February 2, four more Boeing 747 cargo flights had arrived at Tel Aviv. In addition, two U.S. Air Force C-141 flights arrived carrying communications personnel along with nearly 50 tons of equipment—vans, generators, and instruments borrowed from the Air Force. Although military technicians were eligible to enter the Sinai, the Department of Defense ordered the Air Force men not to do so. They remained in Tel Aviv and relayed instructions through an emergency hookup to the civilians readying the system at camp. The equipment, borrowed from the U.S. Readiness Command, included three TRC 136 transportable communication centers equipped with transmitters, receivers, and appropriate antennas, one M-4 "expando" van, two portable, 60-kw power generators, and two truck-mounted air-conditioning units of 35,000 BTU each.

One week later, a 100-foot antenna tower had risen alongside the cluster of Air Force vans, voice links between the SFM, the UNEF, and Tel Aviv were in use, and the link with Cairo was almost ready. A radioteletype circuit with the U.S. Embassy at Athens supplied a direct, secure, telegraphic hookup between SFM and Washington. Secretary Kissinger inaugurated the circuit by sending a congratulatory message to the advance teams in the Sinai on February 9.

Between January 23 and February 9, the site for the base camp, upon which more than a hundred people—supervisors, secretaries, technicians, and construction and maintenance workers—had begun to converge, was transformed from bare, rocky ground into a habitable, if austere, community. Two barracks were occupied; two more were almost completed; and a mess hall replaced the field kitchen. An administration



Temporary base camp in the Sinai.

building as well as the Mitla East and Giddi East watch stations were in use. All of the buildings were temporary structures erected from Kelly Klosure panels. Zachry Company chose this form of construction for the simplicity of its basic structure (prefabricated steel frames supporting fiberglass panels), the ease of shipment and assembly, its fire-resistant qualities, and flexible uses. Water, a treasured commodity in the desert, flowed into a 1,500-gallon storage tank through a hookup with an Israeli pipeline. Two storage bladders of 2,000-gallon capacity contained fuel.

During the first week of February, 30 E-Systems technicians selected to staff the watch stations began a course in sensor operation at Fort Belvoir, Virginia. State Department communications specialists went to MacDill Air Force Base in Florida to learn maintenance and repair of the communications equipment on loan from the Air Force. The Foreign Service Institute held an orientation seminar on the Middle East February 9–10 for SFM members.

In the Sinai, February was a month of occasional bad weather. Nights were frigid but not so cold as to eliminate ever-present flies. Constant winds swept soil loosened by bulldozers into clouds of clogging, choking dust. And there were other problems: some delays in shipping spare parts and trouble in finding enough moisture for electronically grounding the communications equipment. But the work went steadily forward. Four sensor specialists from MERDC's Counter Intrusion Laboratory followed in the wake of Israeli mine detectors and demolition squads to install the four sensor fields, an accomplishment which took 4 days. The third watch station at Mitla West went up. The communications network now included an operations center at base camp linked with all three watch stations and the Egyptian and Israeli surveillance stations, as well as with Cairo, Tel Aviv, and UNEF at Ismailia.

The Sinai Field Mission achieved full operational surveillance capability at 5:00 p.m. local time on February 19, 1976, 28 days from the start of construction, 3 days ahead of the deadline. Teamwork within government agencies, the resources of private enterprise, long hours of work, and the dedicated efforts of everyone engaged in the project since its inception in September 1975 produced the extraordinary feat of a fully operating early warning system in the distant waste of the Sinai barely 6 months after the idea was first proposed. One million pounds of equipment, vehicles, and housing materials accumulated from all over the United States had been flown to the Middle East. Out of this mass of material emerged a coherent functioning community and the early warning system.

Officially, the SFM commenced its operations on February 22, when the Israelis withdrew to the eastern end of the Passes, the Egyptians moved forward from their previous positions, and the UNEF arrived to control the buffer zone. On that same day the SFM Director made his first inspection of the Egyptian and Israeli surveillance stations to ensure that no unauthorized personnel, vehicles, or weaponry were at the stations. Several weapons considered to be in violation of the Sinai II Agreement were found at the Israeli site; they were removed before a followup inspection 3 days later.

The procedures to govern the reporting of intrusions or violations and the verification and monitoring of all movements into and out of the surveillance stations had been agreed upon between the SFM and Israeli, Egyptian, and U.N. authorities prior to February 22. Verification and reporting procedures were identical for both stations. The credibility of the SFM operation hinged in large part on a scrupulously fair and even-handed performance. A principle of "symmetry," as it was called, underlay all SSM policies, procedures, and relations with Egyptians and Israelis. It extended beyond functional operations to local procurement of supplies and services and to rest havens for SFM personnel in both countries. It was decided, for instance, that the SFM Director's family would live in Cairo, while the Deputy Director's family would be housed in Jerusalem.

In practice, the all-important detection and inspection activities of the SFM met the symmetry requirement. On the less central issue of support services, SFM spending tended toward Israel. The sums involved, however, were insignificant. Petroleum products for the most part came from Egypt; most fresh food was purchased in Israel, as well as some spare parts and maintenance services, since they were more readily available there.

Phase II From the outset, the SFM temporary facilities were intended to be an expedient means of shelter adopted for Phase I in order to meet the February deadline. A Kelly Klosure, however transportable and easily assembled, provides just what its name implies—an enclosure. The permeability of the walls, which allowed sand and dust through, was its most serious deficiency. Even additional insulation proved unavailing. Intestinal and respiratory ailments followed. The fiberglass walls and roofs also achieved a greenhouse effect, giving rise to interior temperatures in some buildings of 105° F on several days and, in the kitchen, of 120° F on one occasion.

Barracks became overcrowded and cramped, as did office space. Initially there were no shower and indoor toilet facilities. Later, after plumbing had been installed, the water supply proved unreliable because of occasional pipeline breaks. Work schedules were intensive; recreation activities few. No nearby town offered a momentary diversion. Mess hall food was plentiful and nutritious, but menus were only of the kind a field kitchen can produce.

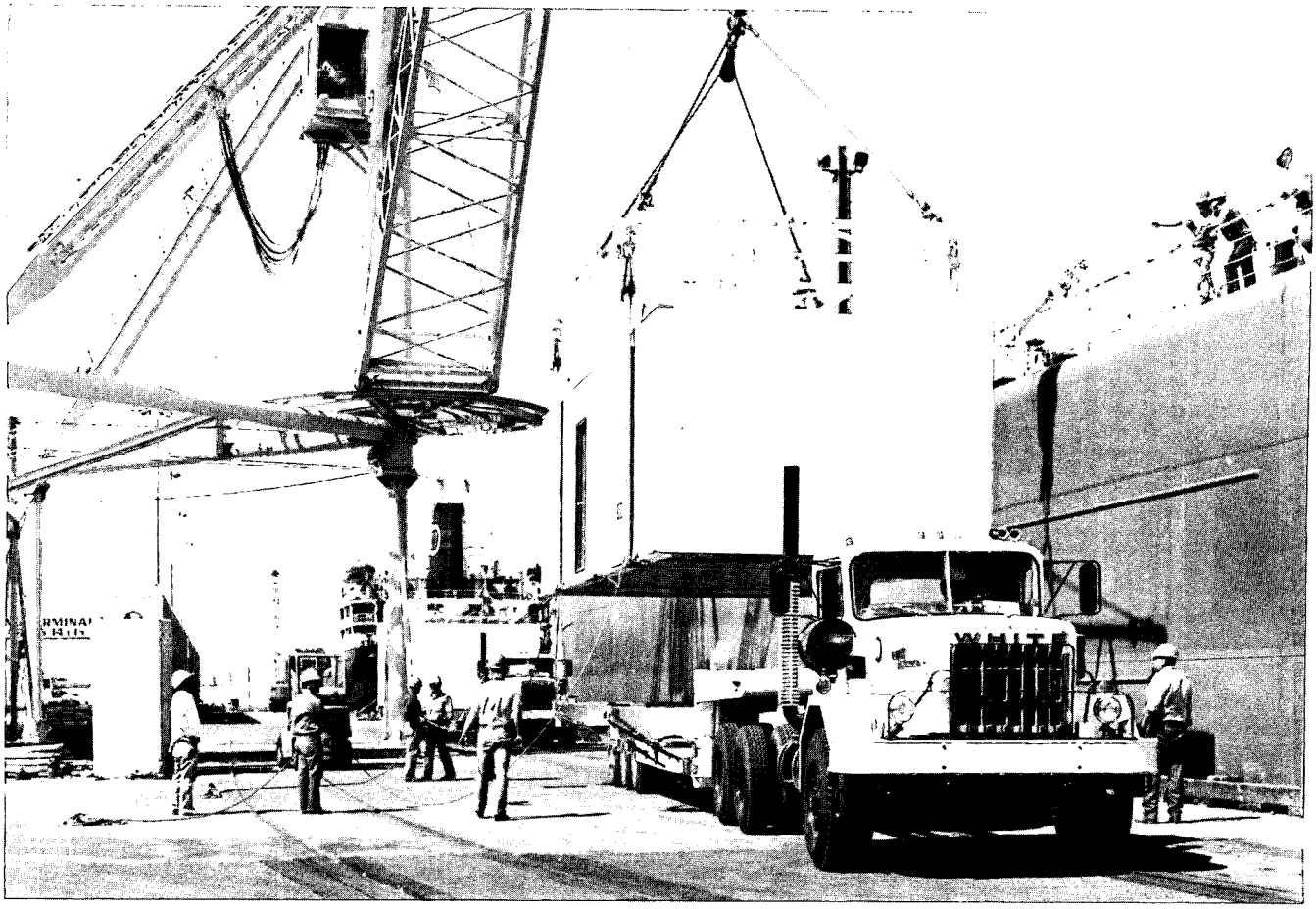
In spite of hardships, morale was high. Toward the end of the construction phases, Zachry workers started sporting, with justifiable pride, "We Built the Buffer City" T-shirts.

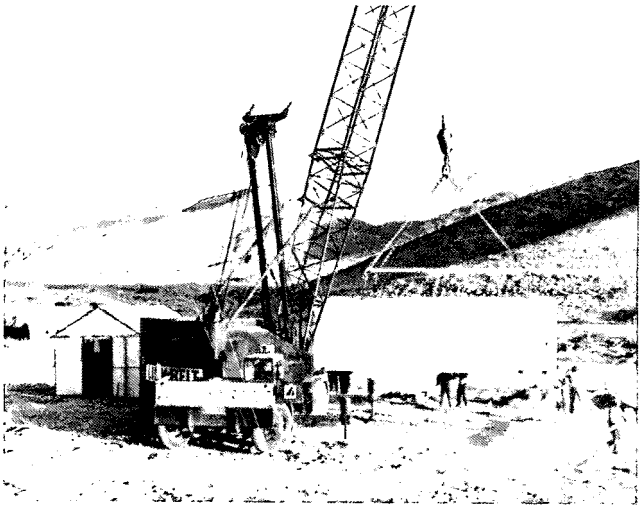
Some construction continued at the temporary base camp and watch stations and sanitation facilities were improved after February 22. The center of activity, however, shifted to work at the permanent site. During the first week of March, Zachry Company surveyors, engineers, and construction workers, in consultation with SSM representatives, finished staking out the perimeters of the permanent base camp and watch stations, located access roads, and started grading and filling the sites.

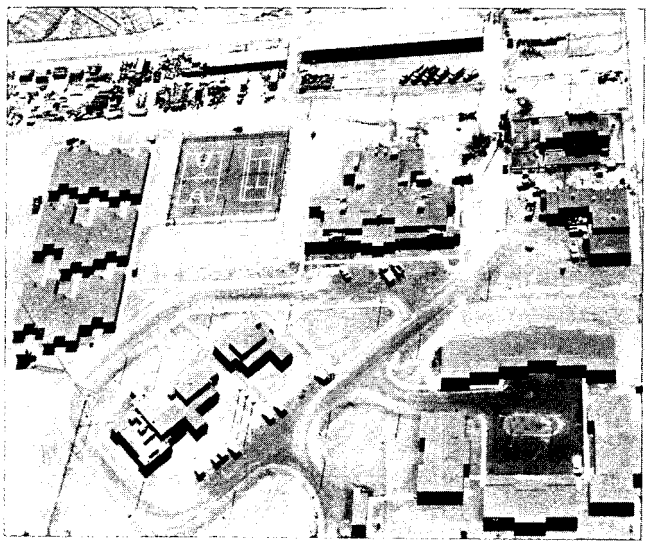
Base camp buildings were oriented to avoid surface rock. Grading was designed to accommodate a site for the sewage treatment plant that would allow proper sewer system fall and avoid bedrock and boulders over most of the length of the sewer lines. Jackhammers nevertheless had to be used to dig out some of the trenches for these and other utility lines. Electrical distribution and communications lines were similarly buried in conduit. Two 5,000-gallon bladder-type tanks for water and fuel were in place by mid-March. At the end of the month most preliminary excavation work was done, forms were set, and concrete poured for the steel-reinforced footings and piers on which Zachry's prefabricated modules would stand. Construction was about 6 days ahead of schedule by the end of March.

The transportation crisis which arose at this time threatened to delay the remaining construction schedule. Zachry Company had in stock prefabricated concrete modules ready to ship. These units came fitted with electric wiring, plumbing, and some built-in furnishings. They could be shipped like containers, piled one on another. Zachry contracted with the Garth Shipping Company, Ltd. of London for the transport of a shipload of the modules from Corpus Christi, Texas, to the Middle East aboard the M/S *Garthnewydd*. The crisis arose from a change in the ship's destination from Port Said, Egypt to Ashdod, Israel. Much of the Garth Company's shipping called at Arab ports, and the company risked retribution from the Arab Boycott Office. The company wanted a guarantee against blacklisting.

An initial February survey of facilities at Port Said had found them suitable, whereas a later survey revealed inadequacies, including the fact that the only crane capable of lifting the heavy modules was out of service. Further, an updated survey of existing road beds from Port Said across the Suez Canal and in the Sinai revealed that some had been virtually destroyed in the fighting during the 1973 war or by the movement of heavy vehicles during the recent redeployment. Trucks bearing modules, with combined weights up to 75 tons, ran a high risk of damaging the few remaining roads as well as the modules. If road repairs had to be done, delays to the construction schedule and







Module is loaded onto the Gartnewyd (top) and put into place at the Mitla East watch station (above); aerial view of the nearly completed SFM base camp (right).

substantially increased costs were certain. None of these problems affected transport to the Sinai Passes via the Israeli port of Ashdod, hence the *Garthnewydd's* rerouting. Although the Arab Boycott Office replied that giving a guarantee of the kind requested lay beyond its jurisdiction, a Zachry Company representative persuaded the Garth Company that the risk of retaliation in this instance was slight. The *Garthnewydd* docked at Ashdod.

The S/S *Thompson Lykes,* a U.S. merchant ship chartered for a second load of equipment, reached
18 Ashdod during the last week of March. Between them, the two ships carried 124 modules, cranes for handling the modules, a substantial portion of the SFM vehicle fleet, and equipment of diverse dimensions and kinds.

The *Garthnewydd* affair proved to be the only potentially serious crisis of the second construction phase between February and June, although the demanding work and living conditions took their toll of men and machines. Equipment broke down, power sometimes failed, roads were poor and deteriorating, and health and morale suffered from the heat, dust, flies, and occasional fouled water. Violent sandstorms also occurred—one of several days' duration. Winds gusted to 75 miles an hour, collapsing panels and ripping strips off the Kelly Klosures, depositing drifts up to 14 feet high on some major roads. Throughout this period of physical discomfort and hectic construction activity, the SFM performed its surveillance operations effectively.

In any such intensive endeavor, especially one involving three parties—the U.S. Government (SSM/SFM), E-Systems, and Zachry—some misunderstandings might be expected and some occurred, e.g., a decision taken by one without consulting the other two parties, and disagreements over technical or construction matters or over contract changes. To resolve such difficulties and to assure continuing adherence to the tight construction schedule, daily contacts between the SSM/SFM, E-Systems, and Zachry personnel were augmented by periodic 1- or 2-day program reviews attended by key members of the three organizations.

By April 27, 1976, the last of 119 modules had been installed at the base camp. Two modules each were placed at the Mitla West and East watch stations and the final unit went to Giddi East on April 30. With all buildings in place, interior work intensified to connect or complete plumbing, wiring, insulation, heating, air-conditioning, etc. The complex expanded with interconnecting roofs and walkways, a sewage treatment plant, water and fuel storage, roads, parking lots, recreational facilities, storage and maintenance facilities, and antenna towers. Chain-link fences surrounded the base camp and watch stations, marking the boundaries between the isolated islands of American life and the vast wilderness of Sinai.

Transfer from the temporary to permanent quarters began and, although some finishing and cosmetic work on service buildings remained to be done, all major facilities were occupied and operating by July 1, 1976, precisely on schedule.

Many visiting journalists since have described SFM's base camp as resembling a stateside motel. This is not surprising inasmuch as its modules were originally intended for a motel in Florida, rather than for an outpost spread across 13 acres of an escarpment overlooking the Giddi Pass. In view of its isolation, the base camp was designed as a self-contained community, supplying its own "municipal" services: water treatment and distribution, power generation, waste and sewage disposal, transport and telecommunications, health services, and fire protection. Its prefabricated concrete modules set on concrete footings were grouped in differing configurations to form clusters to house government communications, administration and operations, contractor administration, a community facility, a maintenance/fire station, a power station, a sewage treatment unit, and living quarters consisting of one complex of 4- and 6-person units and another of 1- and 2-person units. Outdoor recreation areas included a softball field and a combined tennis, basketball, and volleyball court.

The community center contains a kitchen and dining hall, a theater available for movies, meetings, or religious services, and a recreation area for table tennis, pool, and other games, or television. The building also houses the laundry/drycleaner's, a library, lounge, store, and a barber/beauty shop which doubles as the post office. The dispensary too is located here, where one of three paramedics is always available to treat minor ailments.

SFM has no full-time physician. The Department of State's Medical Division recommended against assigning one, in view of adequate medical facilities available at the Israeli surveillance station or at Israeli battalion headquarters 2 miles away. For emergencies, the Israeli Defense Force offered the services of its hospital at Rafidim Air Base, only 25 miles away, and helicopter transportation. SFM possesses a fully equipped ambulance which, in an emergency, is authorized to drive unimpeded and without escort to any of these facilities or to major cities in Egypt or Israel.

A fire station and maintenance building houses firefighting equipment and a room for on-duty firemen. Other areas provide space for electronic maintenance, vehicle repair bays, work benches, and spare parts storage, as well as space for plumbing and electrical and carpentry work.

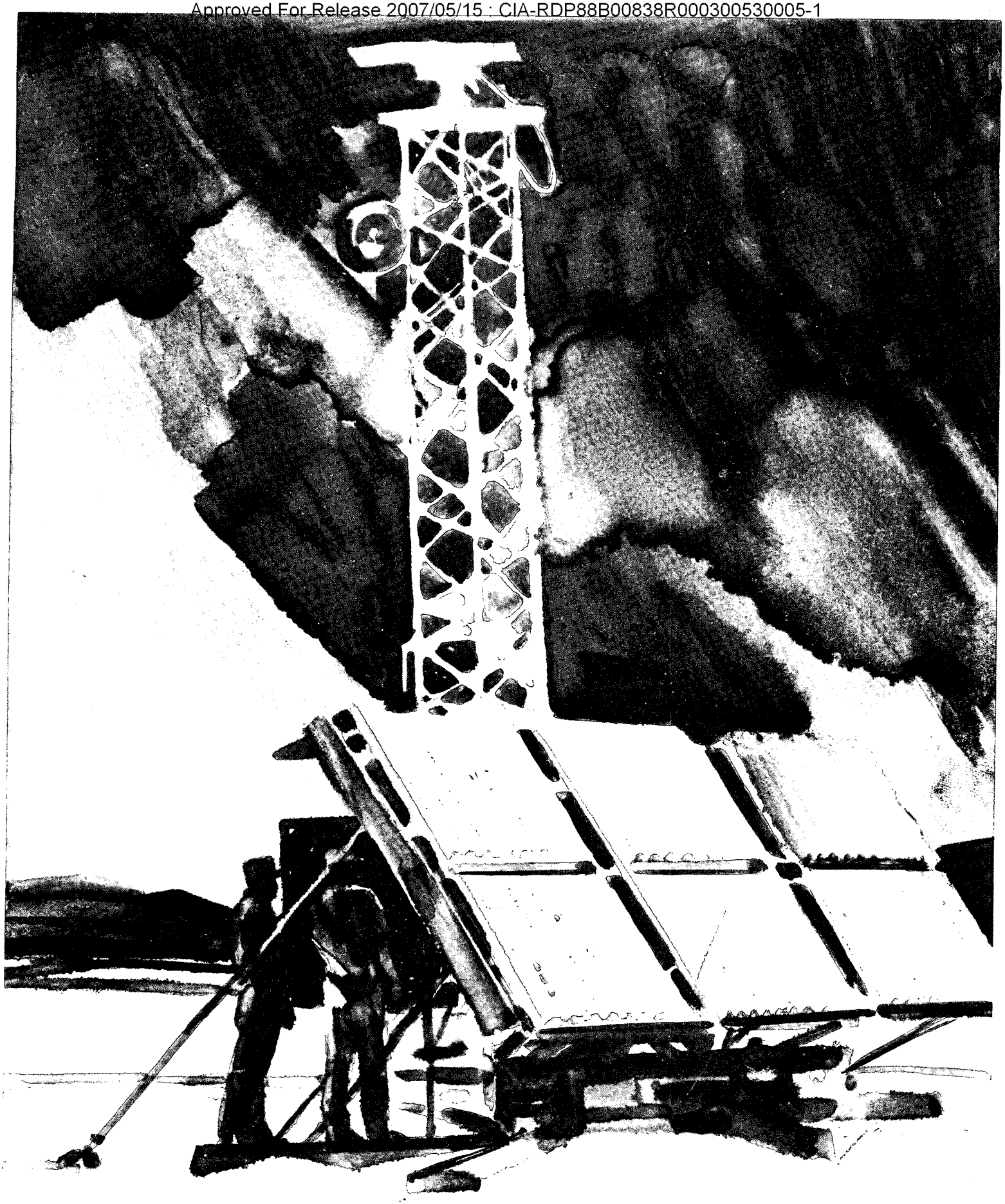
The power station contains diesel-driven electric generators and water distribution and storage facilities. Three primary generators and one backup generator provide SFM with continuous power, drawing fuel from underground tanks next to the building. Water is stored in underground and aboveground tanks from where it is pumped throughout the camp.

The startup cost incurred by the U.S. Government in establishing permanent quarters in the Sinai was $21 million. This figure included the cost of all materials and services during the construction period, operating costs to June 30, 1976, and the cost of E-Systems outlays to September 30, 1976. It also included costs for communications and sensor/surveillance equipment provided by the Departments of State and Defense.

With SFM's move into permanent quarters, about 80 percent of the Kelly Klosures and other temporarily needed materials became excess property which the UNEF wished to purchase. (Excess property could be sold under the provisions of the Federal Property and Administrative Services Act of 1949, the Foreign Assistance Act of 1961, and Executive Order 11896.) These items originally cost the Sinai Mission approximately $400,000. A price of $125,000 was negotiated with the United Nations, along with some restrictions on their use—for UNEF's peacekeeping activities in the Sinai Peninsula and not for resale before expiration of a 6-month period after purchase.

July 4, 1976, marked a double occasion, the Bicentennial of the United States and the official dedication of the completed facilities of the United States Sinai Field Mission. Receptions and dinners for U.N. officers from nearby checkpoints and for officers from Israeli and Egyptian stations celebrated these events. SSM Director C. William Kontos, coming from Washington, and John W. Dixon, President and Chairman of the Board of E-Systems, arriving from Texas, joined the festivities. Congratulating the assembled on a job well done, Mr. Kontos said: "You have not only accomplished the operational task at hand in remarkable time, but you have transformed this small section of arid and inhospitable desert into a livable community, displaying those attributes which have brought our nation to a 200th anniversary worthy of celebration." Secretary of State Henry Kissinger wired these words:

> "The successful operation of the Early Warning System is an important element of the Sinai disengagement agreement between Egypt and Israel. Perhaps even more important, it underscores our determination to continue our efforts to resolve the difficult and tragic conflicts in the Middle East. The celebration today of the official opening of the permanent camp facilities in the Sinai is a fitting moment to reaffirm our determination to pursue these efforts until our ultimate goal, a durable and just peace, has been attained."



Keeping Watch

Staffing the Sinai Field Mission The number of people permanently assigned to the Sinai Field Mission's complex is limited by Congressional Joint Resolution (P.L. 94–110) to 200. The American contingent in the Sinai exceeded that level only for a period of about 6 weeks—from mid-May through June 1976—when the construction schedule compelled the use of a sizable work force of contractor personnel. At the time of formal dedication on July 4, 1976, SFM numbered 172 Americans; this figure had dropped to 162 by July 1977. The reduction resulted from the improved facilities available in the permanent base camp, from combining some functions, changing operational procedures, and introducing new technology. For example, the completion of permanent communications facilities permitted a 50-percent decrease in the number of government communications technicians.

The U.S. Government's responsibility for the Mission and its operations requires that top SFM management positions be filled with government personnel. Nicholas Thorne, SFM Director from December 1975, was succeeded in July 1977 by Leamon R. Hunt, former Deputy Assistant Secretary of State for Operations. Mr. Hunt, in turn, was replaced in January 1979 by Kenneth A. Hartung, former Executive Director of the Foreign Service Institute. Similarly, the sensitive role of liaison officer to the Egyptian or Israeli surveillance stations is assigned to a government employee. The secure communications system linked with the U.S. worldwide network is also operated by government technicians. The U.S. Government group includes some personnel occupied with administrative and secretarial support.

About 150 Foreign Service employees of AID, USICA, and State applied for duty in the Sinai in response to a second call for volunteers in July and August 1976, and there has been no shortage of candidates since then to replace those who have been transferred. The attrition rate has been minimal.

E-Systems met with much the same response; applications for employment greatly exceeded the number of positions available, and its attrition has averaged below 3 percent per month. The basic tour of duty for contractor personnel is 18 months, with an extension possible by mutual agreement. About half of the original staff (numbering 146) chose to extend their tours. By 1978 the full complement at SFM amounted to 160—22 U.S. Government and 138 E-Systems personnel. Of the latter, 34 were directly involved in operations—staffing the watch stations on a rotating schedule, checking the sensor fields, and the like. About 104 were engaged in support and maintenance tasks. Small support offices in Tel Aviv and Cairo handle the logistic needs of local purchase, shipment, etc.

The E-Systems organization at SFM, headed by a contractor Program Manager, includes a management and technical staff of executives; communications/sensor operators and specialists; a maintenance staff of driver/mechanics, electricians, carpenters, painters, plumbers, and power plant specialists; and a personal services staff which runs the post office, barbershop, dining facilities, housekeeping, laundry and sanitation, security and fire protection, recreation, and paramedical services.

From the outset, SSM planners recognized that various personnel and recreational services would have to be provided to boost morale, minimize attrition, and relieve the monotony of living and working in so isolated a place. Morale rose substantially following the move to permanent quarters and has remained high, as reflected in employee performance and minimal staff turnover. Leave policy allows contractor personnel to be off base 1 week in 4, and an active recreational/educational program provides opportunities for varied individual interests.

E-Systems, as part of its contractual obligation, recruited a highly qualified social and educational specialist to organize and direct the recreation program. Since his arrival in June 1976, he has organized a number of programs: correspondence and extension courses; foreign language studies, particularly Arabic and Hebrew; excursions to resorts and clubs along the Suez Canal and Mediterranean coast; live entertainment by UNEF units and groups from Israel and Egypt; visiting lecturers who speak on history, religion, archeology, and meteorology; publication of an informal newsletter for SFM employees, the *Sinai Sensor;* sports and games (softball, volleyball, tennis, basketball, pool, Ping-pong, darts, chess, checkers, bingo, etc.); and the operation of an amateur (ham) radio station (W7LXE/SU).

The U.S. Congress in approving the creation of the Sinai Mission asked that every effort be made to reduce, if possible, the size of the American staff. Improved technology contributed to some cutbacks, but an irreducible minimum staff is required to operate and maintain the equipment. Prospects for further staff reductions are unlikely in view of the necessity to provide a full range of municipal and support services to this self-contained community.

SSM considered the possibility of employing residents of the buffer zone, for the most part Bedouin, who might qualify for custodial or unskilled labor. To do so, each person would have to obtain a health certificate from the United Nations and background security checks and documentation from both Egypt and Israel. These requirements, plus considerations of security, made this course impractical.

In April 1977, the SSM Director discussed with senior Egyptian and Israeli officials the feasibility of employing third-country nationals in certain SFM support positions. Both parties opined that the success of the SFM—with which both sides were fully satisfied—was due in no small part to its wholly American composition. They foresaw no advantage and only serious problems arising from a change in the arrangements. Israelis and Egyptians alike suggested that, in addition to many administrative and possible security problems, a series of complex new arrangements on the status of other nationals would have to be negotiated with each government concerned. Moreover, officials of both Egypt and Israel maintained that employing third-country nationals would, in effect, alter an element of the Sinai II Agreement itself, thereby establishing a precedent for other changes which neither side might want. Egyptians and Israelis have not altered their views on the subject and the SFM staffing pattern remains unchanged.

Security In its deliberations prior to approving the concept of the Sinai Support Mission, the U.S. Congress showed great concern for the safety of Americans placed in a potentially dangerous position between two former belligerents. The Congress was reluctant to risk either American lives or the possibility of holding the United States hostage by interfering with SFM operations. Security for the field mission, therefore, has been of continuing concern.

In July 1976, the SSM put into effect a comprehensive and detailed "Emergency and Evacuation Plan for the Sinai Field Mission," which had been prepared in close collaboration with the Joint Chiefs of Staff and the U.S. Commander in Chief, Europe (CINCEUR). The SSM based its plan on general guidelines and established procedures, in particular the "Emergency and Evacuation Manual: State/Defense Policies and Procedures for the Protection and Evacuation of U.S. Citizens and Certain Designated Aliens Abroad in Time of Emergency."

The SSM plan provided for withdrawal of U.S. personnel from the Sinai Peninsula in the event of hostilities. Withdrawal could be ordered by the President or the Congress by concurrent resolution; by a combination of officials, including the Presidential Assistant for National Security Affairs, the Secretary of State, and the Director of SSM; or by the SFM Director in case of an imminent threat to the safety of SFM personnel. Evacuation of the Sinai camp could follow: (1) a request from both the Governments of Egypt and Israel, (2) a unilateral U.S. Government decision based on policy evaluation, or (3) a unilateral U.S. Government decision based on evidence of a serious threat to the safety of American personnel.

The emergency evacuation scheme consists of a basic plan with 17 separate annexes. The basic plan sketches a three-phase general scenario (e.g., conditions for three possibilities—standby, partial evacuation, and full evacuation); supplementary information (e.g., minimum times to evacuate SFM site locations and designated evacuation routes); the safe havens to be used by the evacuees; and the tasks of emergency and evacuation officers at the SFM. The annexes contain detailed information and instructions on numbers and location of all personnel, procedures for marshaling of personnel and vehicles, alternative routes of evacuation, maintenance of emergency supplies, and destruction of classified equipment and material.

Various aspects of the emergency and evacuation plan have been rehearsed regularly at the SFM to ensure that each staff member is fully acquainted with his or her responsibilities, that equipment is operational, and that required emergency supplies are available. By April 1977, the SFM was able to notify, assemble, and evacuate in about 40 minutes from receipt of order.

The last major construction project—completed in May 1977—was the installation of a perimeter security system at the SFM base camp, designed to guard against acts of terrorism. The base camp complex is enclosed with concertina wire and chain-link fencing. An inner ring of sensors had been embedded by December 1976, but sensors for the outer ring were not available in the Defense Department inventory and had to be procured by contract. The complete security system consists of physical barriers, sensors, imaging devices, and searchlights. UNEF soldiers guard the base camp and watch stations. The SFM staff is also equipped with light arms for self-defense. However seemingly improbable, a terrorist raid cannot be ruled out.

U.N. Role in the Buffer Zone The United Nations acts in the Sinai as a neutral observer overseeing compliance with the Sinai II Agreement and as a guardian of the buffer zone. It operates through two organizations: (1) the United Nations Emergency Force (UNEF), a force of over 4,000 troops from seven nations, which is responsible for maintaining the inviolability of the buffer zone, and (2) the United Nations Truce Supervisory Organization (UNTSO), which observes compliance with the restrictions imposed within the adjoining Limited Forces Zones.

Authorized access to the buffer zone is controlled by the UNEF through checkpoints at the buffer zone boundaries where main east-west roads cross the boundaries. Prior permission from U.N. authorities in Jerusalem or Ismailia is required to enter the buffer zone, and U.N. escorts, assigned at the checkpoints, accompany Egyptian, Israeli, and some SFM personnel and visitors to and from their destinations in the zone. An exception allows SFM staff to move freely within the SFM area of operation. Additionally, two U.N. roadblocks stand at the western entrances to the early warning area to ensure that vehicles do not diverge from authorized routes. A Ghanaian battalion, based in the zone not far from the SFM camp, patrols and supplies guards for base camp and watch stations.

UNEF headquarters in Ismailia receives SFM radioteletype reports of intrusions or violations. Similar reports go to Egypt and Israel and to the office of the Chief U.N. Coordinator in Jerusalem.

The UNEF, although prepared to do so, has not been asked to assist in medical emergencies. Its primary logistical contribution to SFM has been road maintenance and disposal of unexploded ordnance, duties assigned to the UNEF's Polish Logistics Command. During the first 5 months of SFM operations, road maintenance became a persistent and vexatious problem. UNEF had neither the equipment nor the manpower to maintain adequately the estimated 300 miles of roads in the buffer zone. The Polish road crews were unable to cope with the rapid road deterioration common in a desert environment. SFM mended potholes and removed sand drifts in its own area for about a year. By the spring of 1977, however, additional engineers and equipment had been sent to the Polish unit, enabling repairs to be done with greater despatch and efficiency.

Monitoring the Surveillance Stations The disengagement agreement of 1975 permitted both Israeli and Egyptian surveillance stations to be used for strategic early warning but limited their operations to the capabilities of the visual and electronic surveillance equipment in the stations. A personnel ceiling of 250 technical and administrative employees was set for each station. Each complex (called J–1 and E–1, respectively) occupies an area of about 2 square miles and houses surveillance and communications equipment, vehicles, and light arms. No more than 18 vehicles for administrative and maintenance use are permitted, and only light arms for self-defense are allowed.

To verify access to the surveillance stations and the nature of their operations, SFM liaison officers, occupying control buildings at the stations' entrances, monitor all movements in and out of them. The SFM Director, the Deputy, or the Operations Chief, leading a party of up to four persons, conducts occasional inspections of the stations to verify compliance with the limitations and rules of the Sinai II Agreement. Any divergence from these limitations or from the authorized role of visual and electronic surveillance is immediately reported by the SFM to both parties and to the United Nations.

Although SFM inspections are usually announced 1 or more days in advance, a spot check may be made without notice. As desired by the SFM, a part or the entire station may be inspected. Inspection may touch on all provisions of the Agreement, or focus mainly on one aspect. There is no fixed time limit for the inspection. The inspection group informs the station commander on arrival of what is to be examined. The daily SFM situation report sent to its Washington headquarters records the results of each inspection tour. Should a violation be found, however, a report is sent immediately to the Governments of Egypt, Israel, and the United States and to the U.N. commands in Jerusalem and Ismailia.

SFM liaison officers, who alternate assignments at the stations with duty at base camp as watch officers, occupy the liaison buildings at the entrance to each surveillance station. Each office is equipped with radio and teletype communications that permit continuous, instant, direct access to the SFM operations center. The office also provides living quarters which the U.S. liaison officer shares with an Israeli or Egyptian counterpart. The liaison officer's principal duties are to inspect and log all arriving and departing vehicles, personnel, and arms; to ensure that no unauthorized entries go unnoticed; and to report any violation or unusual activity. The criteria for verification are based upon inventories made during the first inspections of E-1 and J-1 on February 22, 1976, and updated subsequently to reflect acceptable changes of inventory. The liaison officer is also responsible for routine communications checks and housekeeping.

Israeli and Egyptian traffic entering or departing the U.N. Buffer Zone is inspected by the UNEF at its checkpoints to determine the number of passengers and whether unauthorized weapons are carried. Egyptian and Israeli vehicles enter via the Alpha and Bravo checkpoints, respectively. The United Nations notifies the SFM operations center of such movements, and the watch officer in turn informs the liaison officer on duty at the surveillance station of all vehicular traffic destined for a particular station, including any SFM vehicles, and the purpose of the visit. On arrival at the surveillance station, the liaison officer, accompanied at all times by an English-speaking officer of the country concerned, inspects and counts vehicles, personnel, and weapons. The liaison officer may also be asked to verify other occurrences, e.g., whether a nighttime medical emergency really exists, since the Sinai II Agreement prohibits nighttime movements except in emergencies and after coordination between UNEF and SFM.

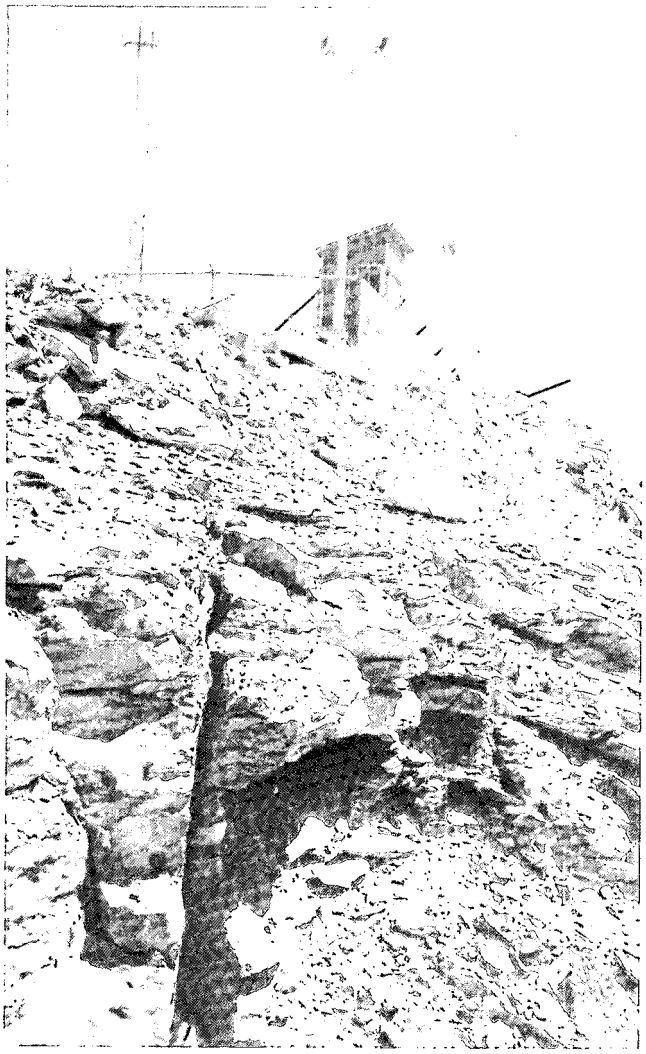
There have been few discrepancies recorded at the surveillance stations since operations began in February 1976. The most common problem has been late-arriving convoys. These have been turned back by the UNEF and SFM if their projected arrival time exceeded the hour set for the last entry or departure. During the early monitoring, a verification problem arose concerning the interpretation of the Protocol to the Sinai II Basic Agreement allowing Egypt to send a construction team into the buffer zone to build the E-1 station. Construction personnel and vehicles then exceeded stated limitations. The two parties, however, agreed to modify the personnel limitation to allow up to 100 entrants at each surveillance station during daylight hours. By and large, such problems have been few and have been settled by mutual agreement.

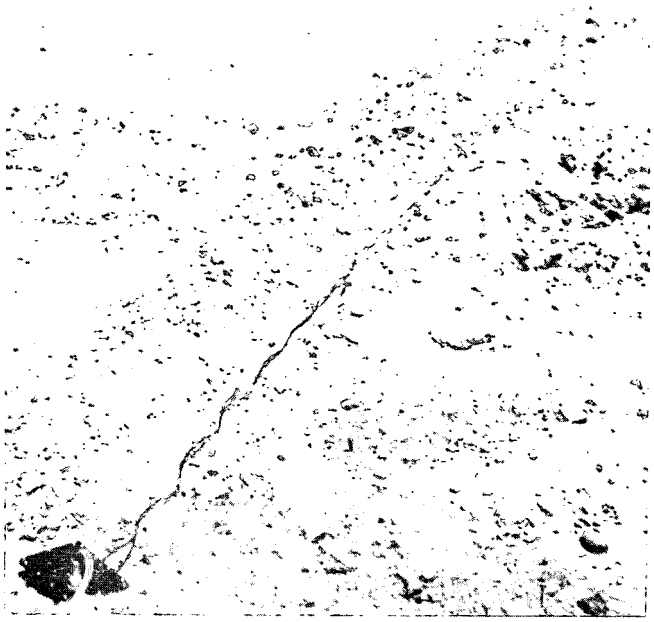
American Early Warning System The early warning system keeps watch over the Giddi and Mitla Passes—traditional invasion routes—and reports immediately to Egypt, Israel, and the UNEF any unauthorized movement into the Passes, or any observed preparation for such movement.

SSM's initial site survey envisaged a system consisting of unattended ground sensors at the eastern and western ends of both Passes—four sensor fields in all—and of visual coverage by personnel at three watch stations which overlook a portion of each field except that at Giddi West. The Mitla East and Mitla West stations lie roughly 20 and 30 kilometers, respectively, from SFM base camp; the Giddi East station is about 10 kilometers east of camp.

Each watch station contains sensor monitoring equipment, visual detection devices, power supplies, and radio and teletype communications equipment directly linked to the operations center at base camp.

Each station is manned continuously by two contractor personnel who are rotated in 12-hour shifts. They keep a constant visual watch and monitor sensor-receiving equipment to register and identify all movements through the Passes. Ground sensors at Giddi West, which is not within sight of a watch station, are monitored at the Giddi East Station.





West-southwest view of the Giddi East watch station (left); Strain Sensitive Cable Sensor (above).

Sensors and Monitoring Equipment Several kinds of unattended ground sensors have been developed for route and border surveillance, and to a lesser degree, for surveillance of a large area. They are based on the detection principles of seismic, acoustic, infrared, magnetic, electromagnetic, pressure, electric, and earth strain disturbances. Optical and electro-optical devices for improved day and night detection also have been developed. Unattended ground sensors and visual devices complement each other. Ground sensors can be used as cueing devices which tell an operator when and where to look for an intruder. By incorporating equipment from a variety of unattended ground sensors and night-vision devices, it is possible to design a surveillance system that will be highly effective for most parts of the world. For the Sinai Passes, it was necessary only to draw upon four types of sensors to meet the needs of the U.S. Sinai early warning system. The following sensors were selected:

—SSCS. The Strain Sensitive Cable Sensor is a miniature coaxial cable buried in the soil. The cable can be extended several hundred meters to form an invisible "fence" which registers any personnel or vehicular movement across the cables.

—MINISID III. A Miniature Seismic Intrusion Detector senses earth vibrations produced by moving personnel or vehicles. Typically, in the sandy soil of the passes, the MINISID III will detect vehicles at a range of about 500 meters and a person at about 50 meters.

—AAU. The Acoustic Add-on Unit is an auxiliary device which, when used with MINISID III, detects and transmits sounds within the sensor field back to the watch station. Transmission of acoustic information occurs only when the MINISID III detects earth vibrations produced by an intruder. The watch station operator is trained to identify the type of intruder from the sound pattern registered.

—DIRID. A Directional Infrared Intrusion Detector senses temperature differences between an intruder and the background. This is a passive optical device with two fields of view. The DIRID reports both an intruding presence and the direction of movement.

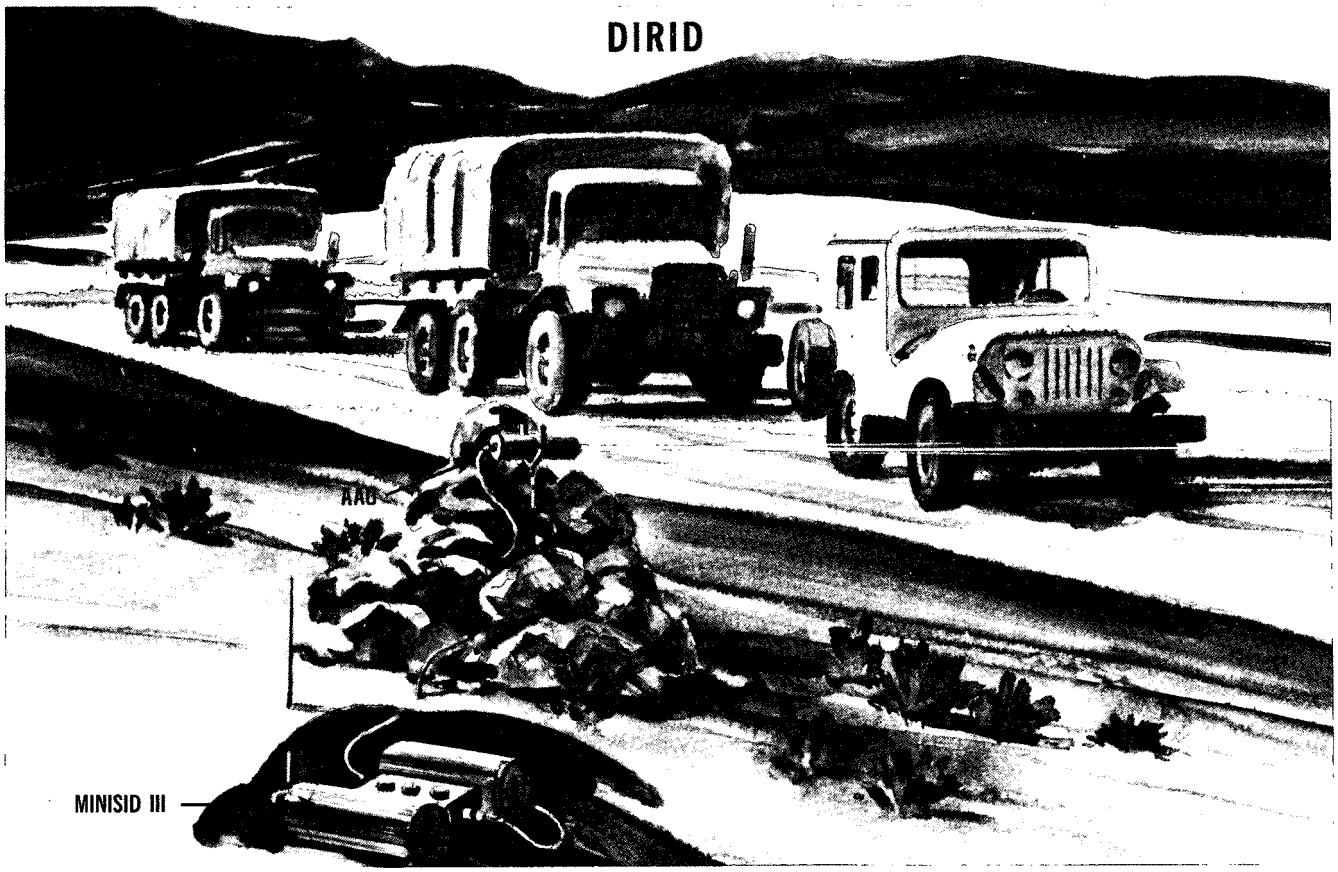


Illustration showing Directional Infrared Intrusion Detector, used for day and night detection.

Each of the four sensor fields within the U.S. early warning area contains two or more strings of sensors, usually several thousand meters long, placed across the Passes and along the roads and trails through the Passes. Any movement detected by one of the sensors activates a signal, which is transmitted by radio to the nearest watch station where it is automatically received and displayed on a recording device. From the pattern displayed, an operator can determine the location of an intruder traveling through the sensor fields, the direction and speed, and the approximate weight and number. The watch station operator identifies the intruder and reports the event to the SFM operations center.

Visual Detection Devices Identification is an especially important task for the U.S. early warning system. About 6,000 vehicles pass through the sensor fields each month. Every vehicle is scrutinized, and since many are built by the same manufacturer, identity is derived largely from visible markings.

Each watch station is equipped with high-power, wide-angle binoculars and a terrestrial telescope for daytime use and a high-power, wide-angle image intensifier for nighttime use. With these devices, vehicles can be identified at distances of up to 20 kilometers during daytime, depending on atmospheric conditions, and up to 5 kilometers at night. Even at night, a person can be discerned easily at 1 kilometer. When a watch station operator cannot identify a suspicious intrusion, the nearby UNEF unit is immediately alerted. A UNEF patrol is then dispatched to intercept, identify, and take appropriate action.

The night observation devices collect starlight, moonlight, or sky glow reflected from the area under observation, intensifying a faint image 50,000 times so that it may be seen by the human eye. The large number of clear nights over the Sinai ensures the utility of these devices. The field model Questar telescope employed at the watch stations is a high-quality, lightweight device serving the need for daytime, long-range visual surveillance. Its optimum usefulness is hampered by limitations in adjusting and focusing, the effect of heat haze on visibility, its narrow field of vision, and lack of adaptability for scanning moving objects. These difficulties are largely compensated by the use of powerful Zeiss 15 × 60 prism binoculars of high optical quality.

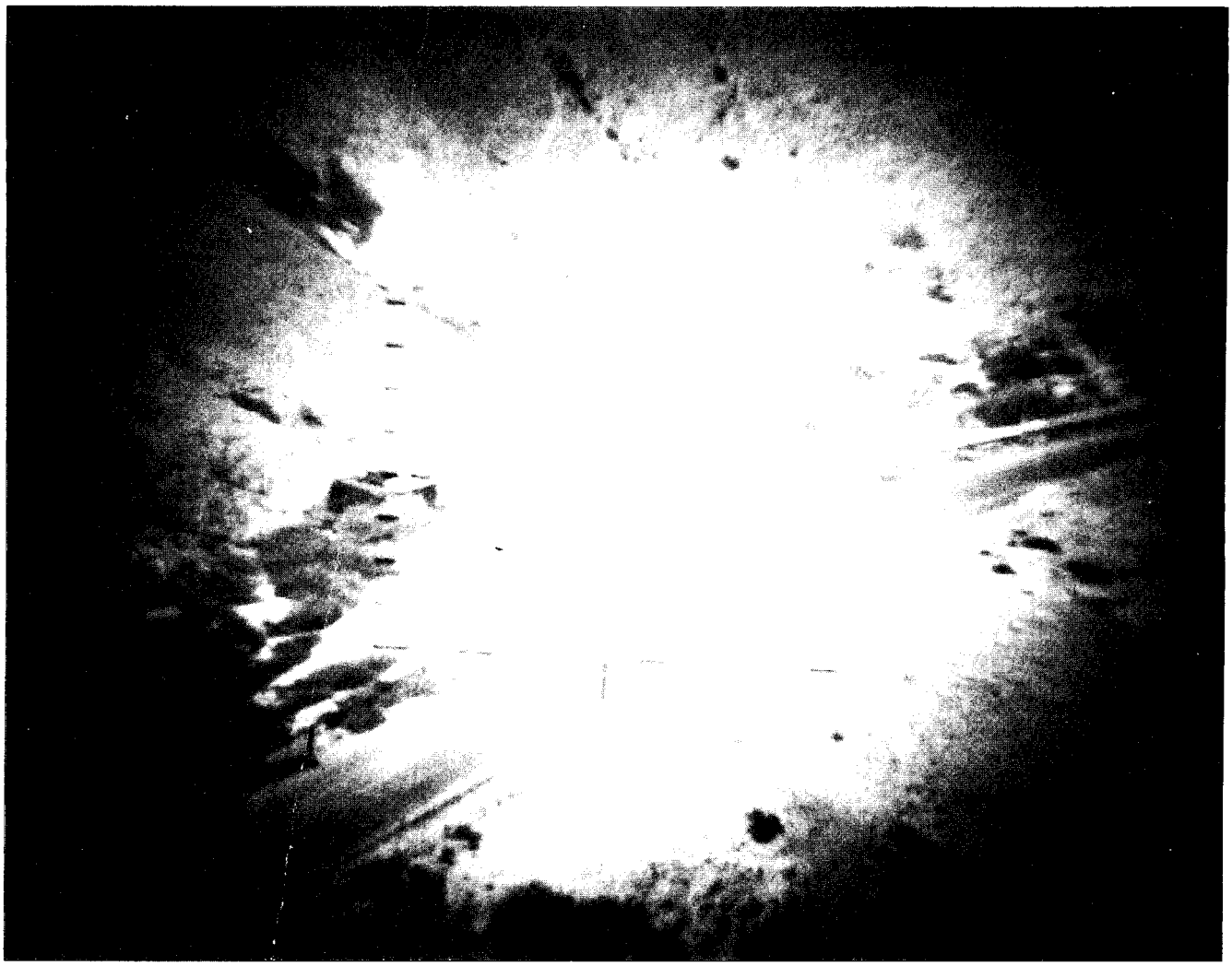


Image intensification device used in low-light night vision.

Dust and ground fog are two of the most frequent problems affecting observational ability. They at times preclude optimum use of optical and electro-optical instruments. To overcome these adverse weather conditions, a passive infrared confirming sensor, basically a remote-controlled infrared camera with a remote readout, was initially employed. It performed well but was later removed because of maintenance problems. In 1978 SFM tested two newer thermal imaging devices, which detect infrared energy emitted by objects within the field of view and which are insensitive to visible light. These devices greatly enhance an observer's night vision capability. They were not procured, however, because they would not be available much sooner than the Mission's completion date as projected in the Egyptian-Israeli peace treaty of March 1979.

During the first 2 years of operation, a strip chart at the appropriate watch station recorded signals radioed from the sensor field. In February 1978, SSM introduced an improved method of display whereby signals from the sensor fields are relayed directly to the operations center at the SFM headquarters as well as to the watch stations. Signals from all fields appear instantaneously on a scaled map of the early warning area. As sensor activations light up small bulbs on the map, an operations officer can locate an intruder at a glance and, by observing the pattern of sensor reports, can determine the nature of the object involved and the direction in which it is moving. The heavier the object, the more sensors are tripped and the more lights flash.

SFM operator monitoring sensor equipment

A second change, fully operational by June 1978, introduced a remotely controlled day and night television camera to overlook the Giddi West sensor field where there is no watch station for direct visual observation. Earlier reports of intrusions in the Giddi West field had not been as accurate or timely as those in the other sensor fields where there are manned watch stations. The U.S. Army's Night Vision Laboratory at Fort Belvoir, Virginia, was asked to develop, test, and install an imaging system for the Giddi West sensor field. The direction and focus of camera and lights are controlled remotely from the Giddi East station. TV pictures are relayed to the display terminal there and to the SFM operations center, providing almost the same visual coverage for the Giddi West field as that obtained by observers of the other fields. Television entailed a relatively expensive initial outlay for equipment and development but operating costs promised to be minimal. Overall expenditure for 1 year was estimated to be no greater than the cost of building and staffing a fourth watch station. Thereafter the cost for maintenance would be lower.

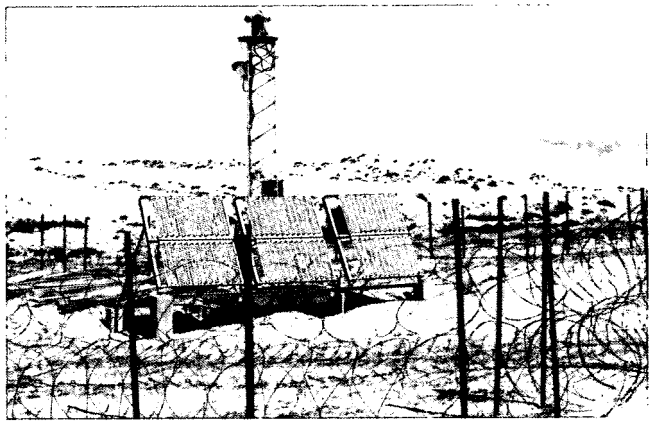
The centralized sensor display and the remote controlled TV camera were changes stemming from a 1977 study to improve the effectiveness of the early warning system.

Research and Development The majority of the unattended ground sensors in the Sinai operation are the "detection only" variety. They automatically detect an intruder and transmit an alarm. A significant research and development effort is underway to increase the capability of unattended ground sensors beyond the "detection only" mode to one of classification. A classifying sensor will not only detect intruders but will automatically identify them by class, e.g., aircraft—rotary-wing aircraft or fixed-wing aircraft—personnel, wheeled vehicle, tracked vehicle. Such a classifying sensor requires a memory for storing the characteristic features or signatures of objects and comparing one set of signature characteristics with others. Until now, the classifying capability of unattended ground sensors has been limited by the large size, cost, and power consumption of available hardware for information storage. However, with recent advances in computer technology, especially in the microprocessor and information storage area, it is now possible to package the electronics of a classifying sensor in a much smaller, cheaper, and low-powered unit. These developments have brought the classifiers from the realm of conceptual design to feasibility.

Advancements are also continuing in imaging sensors and radar. Improved night observation and remotely controlled imaging devices and ground surveillance radars should make it possible to replace most manned observation posts with instrumented surveillance stations. Remote surveillance stations will have an all-weather, day and night capability to detect and classify movements of a military nature at distances of 10 to 20 kilometers from the surveillance station. The imagery from day and night observation devices can be relayed back to a central monitoring point where the nature of the movements can be identified and assessed. These advances should significantly improve the effectiveness and reduce the costs of surveillance operations associated with peacekeeping.

Communications Network A rapid and dependable communications network is the heart of an early warning system. From its forward, isolated post, the Sinai Field Mission needed the means for immediate reporting to all participants in the Sinai's peacekeeping scheme. Teletype, which produces an instant written record of messages, was the preferred mode of communication because it minimizes the chance of misunderstanding in a multinational undertaking.

Remote control day and night television camera at Giddi West sensor field.



SFM's communications operations and administrative office.

Until the permanent communications center was built and equipped at base camp, SFM depended largely upon radio links established via its mobile vans borrowed from the U.S. Air Force. By July 1, 1976, the permanent system functioned with efficiency, flexibility, and reliability. This system includes the following elements:

1. A secure, high-frequency single sideband radioteletype circuit tied into the U.S. Government telecommunication network. It is operated and maintained by U.S. Government personnel, and its terminal is located in the Department of State, Washington. It is used to handle operational and administrative messages between SSM headquarters in Washington and the field and to communicate with other addressees on the worldwide government network.

2. A data-reporting network, largely within the early warning area, of independent two-way voice circuits using very high frequency (VHF) radio links SFM base camp and the following points: the three watch stations, the two surveillance stations (E-1 and J-1), UNEF Checkpoints Charlie on the east and Alpha on the west, and, at longer range, UNEF headquarters at Ismailia. Field telephones also connect SFM base camp with UNEF Checkpoint Bravo and with an Israeli liaison office near the camp. Teletype facilities provide record copy of transmissions at all terminals except at the U.N. checkpoints. The system is used by watch station operators for reporting, by UNEF to inform SFM of authorized movements in and out of the buffer zone, and by the SFM watch officer to report violations to Egypt, Israel, the UNEF in Ismailia, and the United Nations in Jerusalem.

3. Teletype circuits link SFM with the office of the U.N. Chief Coordinator and the Israeli Ministry of Defense Liaison Office in Jerusalem, with the Egyptian Ministry of War in Cairo, and with the UNEF headquarters in Ismailia. These circuits provide for instant and simultaneous alert to the Governments of Egypt and Israel and to U.N. officials.

4. A network of vehicle-mounted and hand-held two-way radios connects the data-reporting system with SFM vehicles in transit and with personnel working outside the base camp or watch stations.

5. A base telephone exchange links all sections of the base camp and is tied into the commercial telephone system in Cairo, Jerusalem, and Tel Aviv.

6. A high-frequency, two-way radio initially connected U.S. Government and contractor liaison personnel in Tel Aviv and Cairo with the SFM. It has been retained in the event telephone contact with these two cities should be interrupted.

When in the planning stage SSM considered the question of an alert, it was presumed that communications between the base camp and the E-1 and J-1 stations, as well as the UNEF at Ismailia, would meet adequately the requirement of notifying both governments and the United Nations. The Egyptians and Israelis, however, insisted on direct teletype communications between SFM and their respective ministries of defense. SSM preferred that all field communications with Israel and Egypt remain within the buffer zone and terminate at J-1 and E-1, where operators could transmit an SFM message in their own languages. Nonetheless, discussions revealed that both parties and the United Nations wanted a simultaneous transmission capability with their ministries and U.N. headquarters, as well as with E-1 and J-1, to provide the added assurance of rapid and effective contact, an especially important consideration during times of tension.

After considerable discussion, the United States agreed to provide independent direct communications for alert purposes. The system chosen included teletype circuits for record communications, which were to be used only for an alert, and voice circuits to be used only for maintaining the teletype and for administrative purposes. A teletype report of violation can reach Egypt, Israel, and the United Nations within 5 minutes of its occurrence.

A radio channel backs up the teletype communications with Cairo. Occasional power failures at an Egyptian-controlled radio relay site disrupted the Egyptian alert link. To supplement Egyptian power sources and ensure reliability, two wind-driven generators were eventually installed by SFM at a mountain relay site.

A telephone line to Cairo, supplementing the teletype and radio whose use is more restricted, permits fast communication with Egyptian officials on operational matters. A similar line to Tel Aviv, furnished by Israel, affords an additional commercial link with SFM's logistics coordinator there.

While not a specified function, the SFM on occasion has served as a conduit for exchange of messages between Egyptian and Israeli military forces on scheduled activities, the nature of which might be misconstrued. Both the Egyptian and Israeli military commands have shown a willingness to advise each other, through the auspices of the SFM, of artillery practice, small arms firing, and other training maneuvers planned to take place near the buffer zone. Such advance notice, coupled with the confirmation capability of the SFM, reduces the tension and doubt between the two commands and defuses potential confrontation before it reaches a crisis stage.

Operating the System On a typical day some 200 vehicles or other objects are detected by the sensor fields, registering as "blips" across a monitoring tape. They are identified and their passage recorded by SFM operators. Sensors are triggered by vehicles, natural seismic disturbances, or by aircraft overflights. The vast majority of the activations are caused by vehicles and aircraft authorized to enter or overfly the early warning area. Under the terms of the Sinai II Agreement, each side is permitted escorted vehicle convoys as well as daily reconnaissance flights over the median line of the U.N. Buffer Zone. Violations are reported when unescorted or unauthorized vehicles, aircraft, or personnel enter the early warning area or when an aircraft deviates from the median line or makes more passes over the zone than scheduled.

As of January 24, 1980, a total of 90 violations had been reported to Egypt, Israel, and to the United Nations. Of these, 67 were attributed to the Israelis, and two violations involving prohibited weapons were attributed to the Egyptians. The remaining 21 violations included 19 unidentified aircraft overflights and two unauthorized personnel intrusions. All of these incidents were minor, with no indication of hostile intent.

The numerous and usually innocent causes of sensor activity render correct identification a crucial function of the early warning system. SFM's consistent accuracy in reporting intrusions and violations has earned it credibility and the trust of all parties concerned.

During the early period of operations, the boundaries of the buffer zone were not clearly marked, and accidental overstepping was an occasional hazard. The proximity of the early warning system to Israeli lines contributes to the higher incidence of Israeli intrusions. While the eastern edge of the U.S. early warning area is contiguous with the J-line which marks the Israeli Limited Forces and Armaments Zone, the western edge of the SFM-monitored area is approximately 5 miles from the E-line, the comparable boundary of the Egyptian Limited Forces Zone. Because of this proximity, Israeli crossings of the J-line brought them immediately into the U.S. early warning area, triggering the sensors. Similar Egyptian movements across their E-line possibly infringed the U.N. Buffer Zone but occurred beyond range of the U.S. early warning system. The chance of Israeli incursion is greater also because the eastern and western boundaries of Israel's Limited Forces Zone virtually coincide at a point near the Giddi East watch station, making a very narrow zone.

Each month thousands of sensor activations take place and are recorded at the watch stations. Almost all are caused by authorized traffic moving through the passes (SFM and UNEF vehicles abroad on their respective rounds and Egyptian or Israeli vehicles en route to and from the surveillance sites) or by earth tremors (the Sinai Peninsula is an active seismic region); sonic booms or sound waves from overflying aircraft and helicopters; military exercises and live artillery firing practice outside the buffer zone; blasting, road maintenance, and other construction; UNEF troops who sometimes jog down the roads through and adjacent to the Passes; and the ever-present Bedouin with their camels, who filter through the early warning area.

A nomadic people whose population in the Sinai is estimated at about 80,000, the Bedouin have slight regard for prohibited areas and follow their traditional migratory routes, some of which cross the early warning area. They are accustomed to letting their camel herds wander and graze without restraint. They carry firearms and can be dangerous if an effort is made to compel them to keep their camels out of the sensor fields. Of more serious concern is the possible use by terrorists of a Bedouin disguise. From the beginning of SFM operations, Bedouin movements have been a persistent and thorny problem. The UNEF is responsible for apprehending and removing them from the early warning area; SFM cooperates with UNEF in reporting sightings but takes no further action.

Migrating camel trains on occasion pass through the early warning area.

In handling the Bedouin presence, UNEF was handicapped by poor radio communications and an understandable reluctance to move off safe roads onto ground possibly sown with undetected mines or unexploded ordnance. Progress toward overcoming these shortcomings has led to greater success in coping with Bedouin incursions. The task for the UNEF, and for the Israelis when Bedouin wander into their zone, is the more sensitive because Egypt considers the Bedouin to be citizens of Egypt and maintains an administrative service center for the nomads in the northern area of the buffer zone near the Mediterranean.

American Role in the Zone. The United States responded to requests from both Egypt and Israel in agreeing to establish an early warning system in the Sinai. Since the beginning, both countries have respected the terms of the agreement and have supported and cooperated with the Sinai Support Mission. While the reason for its existence is essentially political, the Mission performs a technical function that is narrowly and clearly defined. This fact makes it easier for the Mission to adhere to the operating principles enunciated by U.N. Chief Coordinator in Jerusalem, Lt. General Ensio Siilasvuo, during his tenure as the UNEF Commander (October 1973–August 1975). These were to be "Firm, Fair, Friendly, and Fast."

The Mission applies a strict interpretation of the Sinai II regulations, including subsequent modifications. Any transgression of specific boundaries is noted and violations are reported immediately. A violation either occurs or does not occur; a discretionary judgment is seldom invoked.

In the delicately balanced situation that exists in the Sinai, even the slightest incident could be exaggerated and thus court an unwarranted response. Reliable, almost immediate, and simultaneous notice to all concerned can avoid these dangers. The high standard of professionalism set by the SFM system and its demonstrated capability consistently to detect, identify, and report promptly is basic to the impartiality which has earned the confidence of Egypt, Israel, and the United Nations.

SFM Liaison Officers assigned to the surveillance stations developed an easy rapport with their Egyptian and Israeli counterparts. Problems occasionally arise, such as late convoy arrivals, but no serious difficulties have been encountered. Numerous exchange luncheons and dinners have taken place between SFM staff and the personnel at these stations, as well as with U.N. personnel from the checkpoints and various headquarters and outposts. Ranking officials of the two governments and the United Nations have visited SFM on several different occasions. SSM Director Kontos, who visits the area periodically, confers with American Embassy, U.N., and Egyptian and Israeli Government officials on their respective concerns and views.

On one occasion Egyptian Foreign Minister Fahmy, who had initially been opposed to and was skeptical of the early warning system and the presence of Americans in the Sinai, spoke of his interest in the system and lauded the work of the SFM. Another visitor, General al-Gamasy, Egyptian Deputy Prime Minister, complimented Mr. Kontos on the SFM performance. He praised the high degree of impartiality and credibility that had been achieved by the field mission, as well as the professionalism with which the operation had been conducted.

During a visit by Mr. Kontos to Tel Aviv, Defense Minister Peres commented that, in his view, no other single element of the Sinai II Agreement had done as much as the SFM to reduce tensions in the Sinai. He felt that the interposition of U.S. personnel was an important precedent and he speculated that the SFM might serve as a model for future peacekeeping undertakings, as for instance, along the Golan Heights. It was largely at his insistence, Minister Peres said, that the stationing of U.S. technicians in the Sinai was included in the arrangements of the Sinai II Agreement. He had been viewed by his colleagues then as having become the father of a very unwelcome baby, but most critics have since changed their opinions and now appreciate the value of the Sinai Field Mission.

"Eyes and Ears of Peace"

Key Elements of Success The U.S. early warning system formed an integral part of the disengagement arrangements spelled out in the Sinai II Agreement. It was a tactical supplement to the strategic early warning stations of Israel and Egypt and was charged with verifying compliance by both parties to certain other aspects of the Agreement. SFM cooperated closely with the U.N. forces which exercised the broader responsibilities of the disengagement. The U.S. role, therefore, was one portion, though a crucial one, of the entire complex of safeguards set up in the region to maintain the disengagement arrangements and an interim peace. The purpose and functions of the Sinai Field Mission were well defined, clearly understood, and welcomed by all parties.

In creating an organization to fulfill this role in the Sinai, a key decision was made to set up a new management structure rather than to assign responsibility to an existing government agency. This enabled SSM to assign a small group of experts to concentrate on a single project, free from the competing demands encountered in larger bureaucratic settings. Administrative support was provided through existing government agencies, thus allowing SSM to remain small. Decisions could therefore be made and implemented quickly, unencumbered by organizational layers. The basic staff components, assigned to SSM for the life of the Mission rather than borrowed on temporary details, provided a combination of continuity and stability.

Although this separate organization had authority to act autonomously in day-to-day operations, it was created as an interagency effort and received a large measure of commitment from each of the participating agencies to ensure its success. SSM called upon various agencies for equipment, administrative services, and, particularly in the early stages of operation, priority attention to SSM needs. These interagency commitments enabled SSM to move expeditiously to begin its operations, and their continued support has been an important ingredient in carrying out SSM's objectives during the entire period of its existence.

In recognition of the unique nature of the Mission's requirements, some unusual contracting authorities were granted by the Executive order which established the SSM. These authorities permitted SSM to tailor its contract terms to the unprecedented circumstances of its role. Most of these were used by SSM when the contract was awarded and are still in use. Others, however, were not found to be necessary but remain available in the event of sudden changes in requirements.

Another critical decision was that of contracting with private industry for the bulk of the work involved in establishing and operating the early warning system. Faced with an extremely compressed time schedule for implementing the U.S. Proposal and with a variety of U.S. Government constraints, the quick response capability of private enterprise was invaluable. The outstanding performance which followed—site construction by the H.B. Zachry Company; operation and maintenance of the early warning system by E-Systems, Inc.—justified the decision. With SSM management and diplomatic responsibility, the combination of private enterprise and government worked successfully to achieve desired results.

A significant factor in the ability of SFM to become operational on schedule was the capability of the Department of Defense to provide the necessary surveillance equipment from its reserves. The equipment had a history of

outstanding performance and a very low maintenance requirement; its performance in the Sinai strengthens that reputation.

Staffing of the field mission in general presented remarkably few problems. Widespread interest in the SFM stimulated large responses both to the contractor and to the U.S. Government recruitment efforts, making it possible to select highly qualified U.S. civilian personnel. In view of strong congressional interest in employing third-country nationals at the field mission, the SSM raised the question formally in April 1977 with senior Egyptian and Israeli officials. Both governments, however, staunchly opposed such a change, and the staff has remained entirely American.

Foremost among the circumstances favoring the effectiveness of the disengagement has been the determination of the Governments of Egypt and Israel to honor the terms of the Sinai II Agreement while persisting in further negotiations. From the beginning and throughout its existence, the U.S. Sinai Field Mission has enjoyed the cooperation and support of both governments. A senior Foreign Service officer coordinated the field mission's activities with both parties and the United Nations. Inherently, the U.S. role in the Sinai had to be carried out with impartiality. All of the SFM's procedures relating to its contacts with Egyptian and Israeli authorities were drafted accordingly. This principle of symmetry also underlay all SFM policies with regard to local expenditures for supplies and services.

Egyptian and Israeli officials on numerous occasions expressed their confidence in the U.S. role and on the fair manner of the system's operation. Officials on both sides also commented that the U.S. presence contributed significantly to a decline of tensions in the area. Some suggested that the interposition of U.S. personnel was an important precedent which might serve as a useful model for similar arrangements elsewhere.

The broad range and diversity of international conflicts requires the international community to seek creative and ingenious solutions. What Vice President Mondale calls "the eves and ears of peace" can be effective tools if there is determination to allow them to be used to foster relaxation of tensions and give the peace process time to evolve.

Drawing upon its 4 years' experience in the Sinai, the SSM believes that the basic operational concepts employed there can be applied to many other border or buffer areas, provided the parties directly concerned want and are willing to support them. An early warning/alert system can be designed to monitor a border or disengagement line, possible invasion routes, or even a predetermined sizable area, using a combination of unattended ground sensors, advanced observation devices, and observer personnel. Such a surveillance system could detect hostile movement of ground forces or clandestine infiltration and provide sufficient alert to allow an interdiction force to react.

The traditional approach to the problem of monitoring a border or a restricted area usually involves wide-scale use of a combination of fixed observation posts and roving patrols. To be effective, this approach needs a comparatively large number of people. Now, however, by using modern surveillance technology, one person located at a central monitoring facility can "watch" a border or area that would normally require a substantial force to patrol. When an apparent intrusion is detected, a small reaction team can be dispatched to investigate the incident. Where large areas or long borders are concerned, the surveillance and interdiction force of a peacekeeping operation using advanced surveillance technology may be reduced by 50 to 75 percent below that needed to accomplish the task by traditional means.

It is not difficult to envisage how these general operational surveillance concepts could be applied to cease-fire and armistice lines in other regions, including other areas of the Arab-Israeli conflict. For example, a network of ground sensors, watch stations, remotely controlled imaging equipment, and river or border crossing checkpoints monitoring a demilitarized zone along the Jordan River Valley could effectively detect and provide adequate alert of any attempted clandestine movement by terrorist bands or unauthorized individuals. Such a system, supplemented by strategic surveillance sites and long-range detection mechanisms, could also provide warning of any ground movement exhibiting potentially hostile intent beyond the demilitarized zone.

The application of concepts now in use at the SFM could, under many circumstances, make a valuable and cost-effective contribution to easing

tensions and improving the climate for political negotiations. The technology employed is not prohibitively expensive, and it can replace substantial numbers of international peacekeeping forces who are not similarly equipped. Whenever contending parties believe early warning and surveillance can contribute to peacekeeping efforts and they are prepared to support such an undertaking, the concept merits careful consideration.

Sinai II Phase Ends Some 500 guests crowded into the compound of the U.S. Sinai Field Mission on April 25, 1979—a day of great ceremony. Honor guards and brass bands of the Arab Republic of Egypt and the State of Israel attended this gathering, come to witness an exchange of documents that would ratify the Egyptian-Israeli Peace Treaty signed in Washington earlier, on March 26, 1979. Ratification formally marked the end of the state of war prevailing between the two nations for almost 31 years.

Under the Peace Treaty, Israeli forces will withdraw in successive stages from the Sinai and return it to Egyptian control. On January 25, 1980, Israeli forces left the area of the Giddi and Mitla Passes. Until that date, the U.S. Sinai Field Mission continued to operate the early warning system, as it had done over the past 4 years.

Initially, the United States expected to begin dismantling its facilities immediately after the Israeli withdrawal from the Passes. Plans for removal were well advanced when trilateral talks in Washington September 18–19, 1979, changed those plans. The outcome of these talks among officials of Egypt, Israel, and the United States was to give the United States and its Sinai Mission a new mandate.

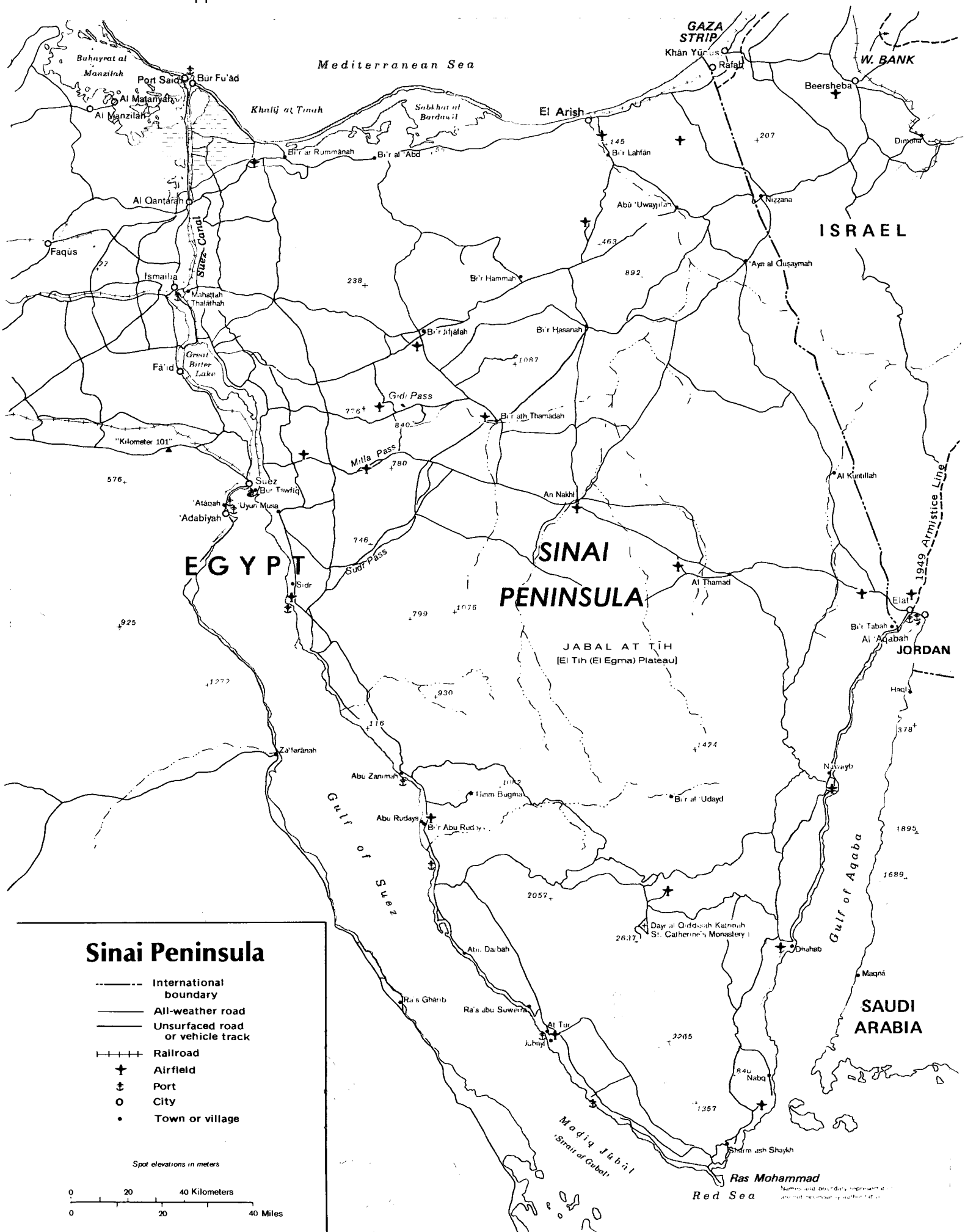
The New Mandate In the phased redeployments by which the Sinai is returned to Egypt, the Egyptian-Israeli Peace Treaty continues to use the concept of buffer and limited armaments zones between the two forces monitored by an impartial third party acceptable to both sides.

The United Nations Emergency Force, which had fulfilled this responsibility during the period covered by the Sinai II Agreement, was not authorized by the United Nations to remain in the Sinai after July 1979. In the absence of a U.N. contingent, the United States at the September talks agreed to extend the life of its Sinai Field Mission beyond January 25, 1980. The Mission's purpose, however, would change from that of operating an early warning system to one of monitoring the compliance of both parties with the terms of the Peace Treaty.

As of February 1, 1980, the SFM became responsible for verifying force levels and armaments at Egyptian military facilities in the Sinai's Zones A and B and at the four Israeli technical sites allowed to operate in the new buffer zone, as set forth in Annex I of the Peace Treaty. From its present base near the Passes, the SFM will conduct aerial patrols and on-site inspection of allowable military installations within the newly designated zones.

Because of its greatly enlarged geographic area of responsibility (about two-thirds of the Sinai) and a continuing staff limitation of no more than 200 persons, the SFM intends to employ helicopters extensively. While maximum use is to be made of existing personnel and facilities, some minor shifts in staffing will be needed to meet the SFM's redirected functions, and the necessity for aircraft will raise the Mission's cost.

The successful past performance of the SFM has helped to demonstrate the constructive possibilities of such a mission. With staff and facilities already in place, it can easily convert to a closely related, if altered, purpose. The Sinai Field Mission has served usefully the interests of peace and, after 4 years' experience, can be expected to carry out with enhanced professionalism the tasks now assumed by the United States in the Sinai over the next 2 years—February 1980–April 1982.



Footnotes

1 The members of the *ad hoc* working group on the NSSM included the following officials: Captain David G. Wilson (DOD), H.F. Hutchinson and Sam Hoskinson (CIA), Edward Sanders (OMB), Major Marshall N. Carter (U.S. Marine Corps officer serving as a White House Fellow with AID), Brig. General Charles D. Youree (JCS), Albert M. Christopher (ACDA), Robert B. Oakley (then serving with NSC, subsequently with State), Granville S. Austin (State), Donald J. Bouchard (State), Alfred L. Atherton (State), Kempton B. Jenkins (State), Frank G. Wisner (State), and B. Keith Huffman (State).

2 Special note should be made of the contributions of Charles Stiles of NSA and James Wallen of DOD whose technical expertise and experience were key factors in setting up SSM and its early operations. Contributions were also made by Gary Bisson (AID), Charles Richard Bowers (State), Major Marshall N. Carter (AID), Stephanie Dibble (State), Gerald John (State), Barry Knauf (AID), Colonel Donald Layne (Defense), Larry Pendleton (NASA), Elinor Green (USICA), and Lorice Bider (State), most of whom joined working groups after the Sinai Interagency Board meeting of November 24, 1975.

3 Members of the Sinai Interagency Board attending the first meeting were: Arthur Day, Deputy Assistant Secretary of State for Near Eastern and South Asian Affairs; Charles Mann, Assistant Administrator of AID for Program and Management Services; Amrom Katz, Assistant Director of ACDA for Verification and Analysis; James Hirsch, Director of Electronic Intelligence, CIA; James Noyes, Deputy Assistant Secretary of Defense for International Security Affairs, Near East and South Asia.

4 Site survey team members included: Morris Draper, State, political adviser; Arthur Houghton, NSC, political advisor; Charles Stiles, NSA, technical program management and surveillance specialist; Colonel Donald Layne, U.S. Marine Corps, tactician and operations specialist; James Wallen, Department of the Army, electrical engineer and sensor specialist; Gerald John, State, contracting and procurement officer; Thomas McCay, State, communications engineer; and Major Marshall N. Carter, AID, operations and logistics planner.

5 These officials included, among others, Ambassadors Eilts and Toon; Egyptian Deputy Prime Minister and Minister of War General Muhammad al-Gamasy; Egyptian Armed Forces Chief of Staff Lt. General Mohammed Ali Fahmy; Chief of the Egyptian Ministry of War Liaison Office Maj. General Taha al-Magdoub; Egyptian Second Army Commanding General Fawzi Gahli; Israeli Defense Minister Shimon Peres; Israeli Maj. General Harzl Shafir; Chief of the Israeli Defense Force Liaison Office Colonel Shimon Levinson; U.N. Chief Coordinator Lt. General Ensio Siilasvuo.

6 Procurement working group: Barry Knauf and Gary Bisson (AID), Larry Pendleton (NASA), Mark Saunders (Department of the Navy), Frank Lane (GSA), and Marie Alexander (State).

7 Under a "fixed rate" type of contract, the contractor is required to deliver specific items of material or carefully detailed specifications of services, the cost of which can be accurately identified and agreed upon in advance of performance. Under the "cost plus fixed fee" type of contract, the work is described in general terms, since it is impossible to describe exactly in advance. Once a Statement of Work is completed, describing generally what the contractor will be bound to do, the contractor and the government agree on a total estimated cost for the work, because the lack of specificity in the Statement of Work precludes agreement on a fixed price. Subsequently, a fixed fee for the work is negotiated and agreed upon. During contractor performance, the contractor is paid actual costs of performance whether or not actual total costs are less or greater than the total estimated cost.

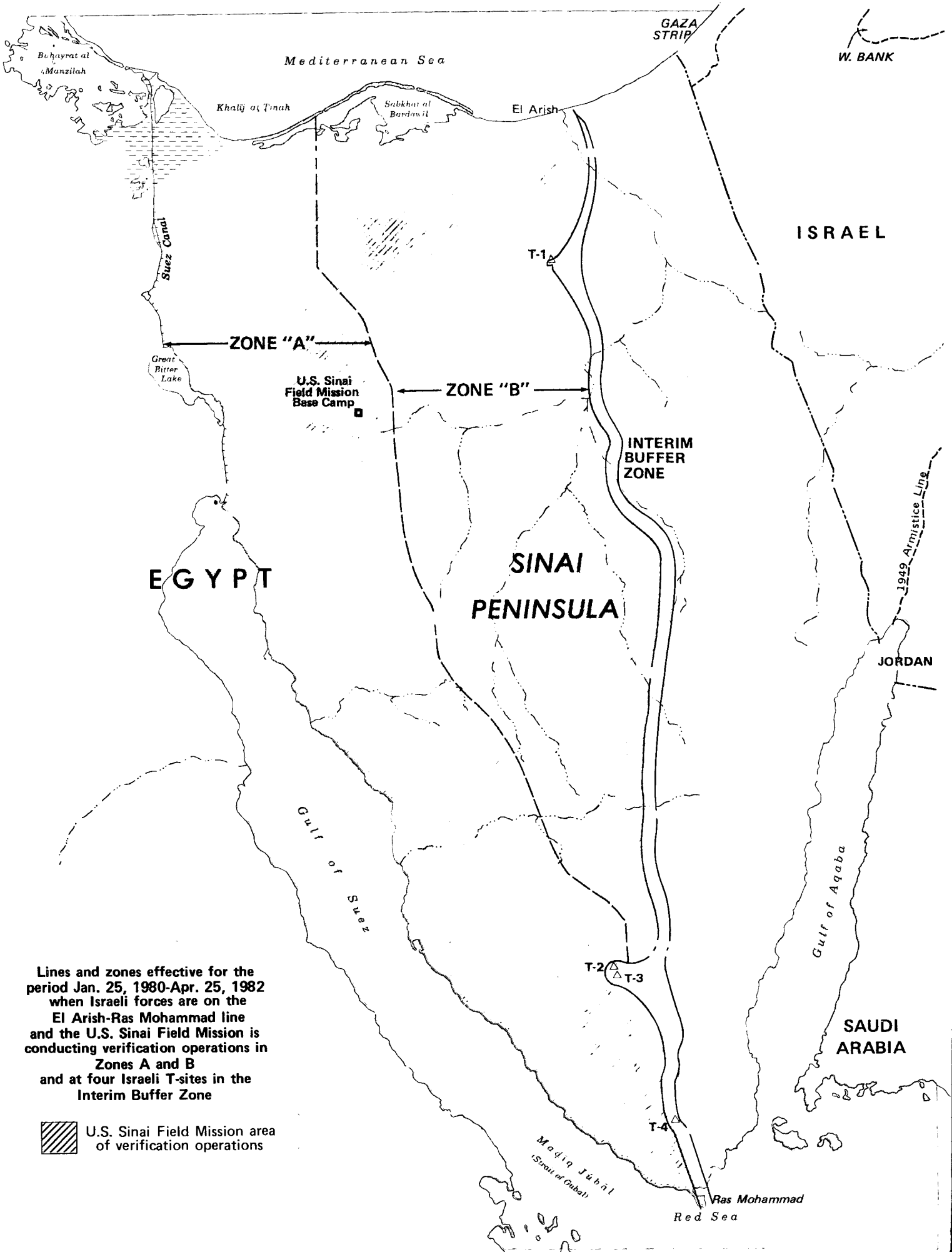
8 These organizations included AID, CIA, NASA, and the Departments of State and Defense. Organizations within the Department of Defense included the Office of the Chief of Engineers (Army), Air Force, Navy, Marine Corps, MERDC (Army), and Office of the Secretary of Defense.

Appendix A

Provisions of Executive Order 11896 – January 13, 1976

By Executive Order 11896 the President formally established the SSM as an independent unit of government. In accordance with the Foreign Assistance Act of 1961 and the Joint Resolution of October 13, 1975 (Public Law 94-110), SSM would carry out the duties and responsibilities of the U.S. Government to implement the U.S. Proposal for the early warning system in the Sinai, "subject to broad policy guidance received through the Assistant to the President for National Security Affairs, and the continuous supervision and general direction of the Secretary of State. . . ." The Order also created formally the Sinai Interagency Board composed of senior representatives of the Departments of State and Defense, ACDA, AID, and the Director of Central Intelligence. The Board would be chaired by the Director of SSM who would be appointed by the President as Director and would be a Special Representative of the President. The Director would exercise immediate supervision and direction over the Mission; the Sinai Interagency Board would assist, coordinate, and advise the Director on Mission activities.

The Order provided that the SSM, to the extent permitted by law, could employ such staff as necessary, enter into contracts and procure services of experts and consultants necessary to carry out its functions, and call upon the agencies of the executive branch to provide required services and facilities. The Order also authorized, if determined to be necessary in writing by the Director, the waiver of certain statutory authorities in order to permit the SSM, consistent with regulations prescribed by the Department of Defense, (1) to indemnify contractors against unusually hazardous risks; and (2) to utilize more flexible contract procedures than normal contracting agencies. The Order prescribed that the Secretary of State would provide from funds made available to the President the funds necessary for the activities of the SSM.



Lines and zones effective for the period Jan. 25, 1980-Apr. 25, 1982 when Israeli forces are on the El Arish-Ras Mohammad line and the U.S. Sinai Field Mission is conducting verification operations in Zones A and B and at four Israeli T-sites in the Interim Buffer Zone

U.S. Sinai Field Mission area of verification operations

Appendix B

Chronology

Basic Sinai II Agreement signed	*September 4, 1975*
National Security Study Memorandum 230	*September 15, 1975*
Public Law 94-110 (94th Congress, H.J. Res. 683)	*October 13, 1975*
National Security Decision Memorandum 313	*November 14, 1975*
First meeting of the Sinai Interagency Board	*November 24, 1975*
Site survey team departs	*December 2, 1975*
Commerce Business Daily article	*December 5, 1975*
Site survey team returns	*December 12, 1975*
Request for Proposal (RFP) released	*December 20, 1975*
First preproposal conference	*December 23, 1975*
Bids submitted	*January 5, 1976*
Bid evaluation by Source Evaluation Committee	*January 5-9, 1976*
Recommendation of Source Evaluation Committee	*January 9, 1976*
Bid selection (Sinai Interagency Board)	*January 10-15, 1976*
President signs Executive Order 11896	*January 13, 1976*
Swearing in of C. William Kontos as Director, SSM	*January 15, 1976*
Contract with E-Systems, Inc. signed	*January 16, 1976*
Contractor and U.S. Government personnel briefed on Middle East	*January 17, 1976*
Communications training for government personnel	*January 19, 1976*
Advance party departs Washington, D.C., for Tel Aviv	*January 20, 1976*
First Boeing 747 arrives Tel Aviv with construction equipment	*January 21, 1976*
Five-day intensive sensor training for E-Systems personnel begins at Fort Belvoir, Virginia	*February 2, 1976*
Department of State personnel begin training on Air Force communications equipment at McDill Air Force Base, Florida	*February 9, 1976*
SFM Communications System sends first message	*February 9, 1976*
MERDC installs sensor fields	*February 13-17, 1976*
SFM achieves full operational surveillance capability	*February 19, 1976*
SFM begins normal operations	*February 22, 1976*
S/S *Thompson Lykes* arrives at Ashdod	*March 26, 1976*
M/S *Garthnewydd* arrives at Ashdod with modules	*March 30, 1976*
Privileges and immunities for SFM personnel formally recognized by Egypt	*April 22, 1976*
Final module emplaced	*April 30, 1976*
U.S. Government and contractors begin operation at permanent base	*June 18, 1976*
U.S. Government communications transfer to new base completed	*June 24, 1976*
Basic construction phase completed	*July 1, 1976*
Permanent facilities dedicated by Director C. William Kontos	*July 4, 1976*
Temporary camp surplus property sold to the U.N.	*October 29, 1976*
Water treatment system installed at SFM	*April 25, 1977*
SFM perimeter security system completed	*May 15, 1977*
Centralized display system installed at SFM	*March 1, 1978*
Remote imaging surveillance system (RISS) installed at SFM	*June 20, 1978*
Egyptian-Israeli Peace Treaty ratifying documents exchanged at SFM	*April 25, 1979*
Washington trilateral talks result in ad referendum agreement giving SFM new mission beginning in early 1980	*September 18-19, 1979*
SFM closes down early warning system and activates new verification system	*January 25, 1980*